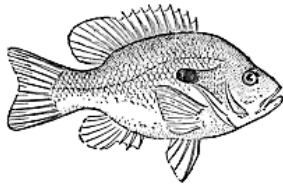


IB/NRES 368 - Vertebrate Natural History

Course Syllabus - Fall 2016



Course Objectives: IB/NRES 368 is intended to introduce students to the ecology, physiology, evolution, taxonomy and conservation of the four major vertebrate classes – fishes, herps (reptiles & amphibians), birds, and mammals. The lecture will focus on global patterns of vertebrate diversity and emphasize theoretical aspects of vertebrate ecology and evolution. The laboratory will emphasize the identification, taxonomy and distribution of common vertebrate fauna of Illinois. We also will take two weekend field trips to identify Illinois species in the field and get hands-on field experience with expert researchers studying each taxon. Overall, the course will provide a broad overview of the natural history of vertebrates both in Illinois and worldwide, and it should serve as a valuable foundation for more specialized courses such as ichthyology, herpetology, ornithology, and mammalogy.

Prerequisites: IB 203 or NRES 219 or consent of instructor.

Lecture Instructor:

Henry Pollock

Email: hpollcock@illinois.edu

Office Location: 515 Morrill Hall

Office Hours: Mondays and Wednesdays, 10-11 am, or by appointment

Laboratory Instructor:

Tara Stewart

Email: tarastew@illinois.edu

Office Location: 449 Morrill Hall

Office Hours: By appointment only

Lecture:

[218 Mechanical Engineering Building](#)

Tuesdays and Thursdays, 12:30pm – 1:50 pm

Laboratory:

All labs in **[Roger Adams Laboratory 304](#)**

Tuesdays, 9:00 – 11:50 am

Final Grade Breakdown:

Lecture Exam 1	100 pts
Lecture Exam 2	100 pts
Lab Practical Exam 1	50 pts
Lab Practical Exam 2	50 pts
In-class exercises	50 pts
Group Projects	50 pts
Lab Quizzes	40 pts
Lab/Field Journal	60 pts

Letter grades will be assigned according to the following standard scale:

Letter Grade	Percentage	Total Points
A	90-100%	450 - 500
B	80 - 89.9	400 - 449
C	70 - 79.9	350 - 399
D	60 - 69.9	300 - 349
F	0 - 59.9	0 - 299

Lecture grades: Lecture grades will consist of three components: 1) in-class exercises (50 points), 2) two group projects (50 points), and 3) lecture exams (200 points).

- In-class exercises – **in-class group exercises** will be related to the material we cover during lecture. Each group will turn in one group worksheet at the end of each lecture.
- Group projects – there will be two **group projects** throughout the course of the semester. Details TBA.
- Lecture exams – each **lecture exam** will be worth 100 points. Exam 1 will cover material for fishes and herps and Exam 2 will cover material for birds and mammals. Exams will be a variable combination of multiple choice, matching, short answer, and essay questions. There will be no final exam. No personal electronic devices are allowed in the lecture room during exams. Use of electronic devices during an exam may be construed as a violation of the student code of conduct.

Lab grades: Lab grades will consist of three components: 1) lab quizzes (40 points), 2) lab practical exams (100 points), and 3) lab/field journal (60 points).

- Lab quizzes – there will be eight **lab quizzes** at the beginning of some lab sessions (typically the second and third lab of each unit - see attached schedule) worth 5 points each. Quizzes will be based on material learned during the previous week of lab.
- Lab practical exams – there will be two **lab practical exams** (one on fishes/herps, the other on birds/mammals) worth 50 points each. Practical exam material will include taxonomic identification of specimens and anatomy and physiology of focal vertebrate taxa. No personal electronic devices are allowed in the laboratory during practical exams. Use of electronic devices during a practical exam may be construed as a violation of the student code of conduct.
- Lab/Field Journal: Students will be required to keep a lab/field journal throughout the semester. The lab journal will consist of material learned in lab and the field journal will consist of field notes taken during the weekend field trips. Details about the content of the lab/field journals will be given by the instructors. The journals will be turned in for grading at the end of the semester (60 points).

Weekend Field Trip(s): There will be two **REQUIRED** weekend field trips (dates TBA). The field trips will be to local natural areas and highlight field collection and identification of each of the four vertebrate groups. We will sample fishes/herps on the first trip and birds/mammals on the second. We will be leaving early in the morning from campus both days and returning to campus around dinner time. Lunches will be provided. **VERY IMPORTANT: we will be doing field work, so remember to wear shoes and clothes that you will not mind getting wet and/or dirty!** More details on the field trips will be provided later in the semester.

Required Field Guides:

Field guides should be brought to lab on a regular basis.

- 1) *Peterson Field Guide to Freshwater Fishes* (2nd edition). 2011. L.M. Page and B.M. Burr. Houghton-Mifflin.
- 2) *A Field Guide to Reptiles and Amphibians: Eastern and Central North America*. (4th edition) 2016. R. Powell, R. Conant and J.T. Collins. Houghton-Mifflin.
- 3) *Peterson Field Guide to the Birds of Eastern and Central North America* (6th edition). 2010. R.T. Peterson. Houghton-Mifflin.
- 4) *Field Guide to Mammals of North America* (4th edition). 2006. F.A. Reid. Houghton-Mifflin.

Course Website: We will be using Compass, and you should have an account if you are enrolled in this course. If you do not have access, contact the instructor immediately. The Compass address is <http://compass2g.illinois.edu>.

Attendance Policies:

ATTENDANCE AT LECTURE IS REQUIRED. There is no textbook for this course, so material for the lecture exams will be derived entirely from the lecture material. If attendance is not possible, it is the responsibility of the student to contact the course coordinator PRIOR to your absence to arrange for any lecture materials distributed in class. If you miss a lecture, you should contact another student in the class to obtain lecture notes. Lecture slides (e.g., PowerPoint presentations) will be made available on the course website prior to exams.

ATTENDANCE IN LAB IS ABSOLUTELY REQUIRED. Because of the large numbers of specimens and according setup time required for each lab, no lab makeup sessions will be available for missed labs. If you miss a lab without an excused absence, you will be penalized accordingly.

YOU WILL NOT BE PERMITTED to make up the lecture or lab exams if you miss an exam day, unless you notify the course coordinator of your absence at least ONE WEEK in advance. Rescheduling exams is entirely at the discretion of the course

coordinator. Make up exams will ALWAYS differ from the regular exam, and may be in a different format than the regularly scheduled exam (i.e., written or oral exam).

Code of Conduct: All students are assumed to have read and understood the “Code of Policies and Regulations Applying to All Students,” University of Illinois, and will be expected to act accordingly.

The Code is available online at <http://studentcode.illinois.edu/index.html>.

Disabilities and Religious Observances:

Please contact the course coordinator during the first week of classes to make requests for disability accommodations or observation of religious holidays.

Week	Day	Date	Lecture	Lab
Week 1	Tuesday	23-Aug	Course Intro/Vertebrate Diversity and Evolution	No Lab
	Thursday	25-Aug	Vertebrate Diversity and Evolution (cont'd)	
Week 2	Tuesday	30-Aug	Fish Biogeography and Diversity	Fish Lab1
	Thursday	1-Sep	Fish Morphology and Physiology	
Week 3	Tuesday	6-Sep	Fish Behavior and Ecology	Fish Lab 2 & Quiz
	Thursday	8-Sep	Fish Life History and Reproduction	
Week 4	Tuesday	13-Sep	Fish Conservation	Fish Lab 3 & Quiz
	Thursday	15-Sep	Herp Biogeography and Diversity	
	Sunday	18-Sep	Field Trip 1 (fish and birds)	
Week 5	Tuesday	20-Sep	Herp Morphology and Physiology	Herp Lab 1
	Thursday	22-Sep	Herp Behavior and Ecology	
Week 6	Tuesday	27-Sep	Herp Life History and Reproduction	Herp Lab 2 & Quiz
	Thursday	29-Sep	Herp Conservation	
Week 7	Tuesday	4-Oct	In-class Exam Review	Herp Lab 3 & Quiz
	Thursday	6-Oct	Lecture Exam 1	
	Saturday	8-Oct	Field Trip 2 (herps and mammals)	
Week 8	Tuesday	11-Oct	Project 1 - 25 local vertebrates	Lab Practical 1
	Thursday	13-Oct	Bird Biogeography and Diversity	
Week 9	Tuesday	18-Oct	Bird Morphology and Physiology	Bird Lab 1
	Thursday	20-Oct	Bird Behavior and Ecology	
Week 10	Tuesday	25-Oct	Bird Life History and Reproduction	Bird Lab 2 & Quiz
	Thursday	27-Oct	Bird Conservation	
Week 11	Tuesday	1-Nov	Mammal Biogeography and Diversity	Bird Lab 3 & Quiz
	Thursday	3-Nov	Mammal Morphology and Physiology	
Week 12	Tuesday	8-Nov	Mammal Behavior and Ecology	Mammal Lab 1
	Thursday	10-Nov	Mammal Life History and Reproduction	
Week 13	Tuesday	15-Nov	Mammal Conservation	Mammal Lab 2 & Quiz
	Thursday	17-Nov	Humans - the most dominant vertebrate	
Week 14	Tuesday	22-Nov	Thanksgiving Break (no lecture)	No Lab
	Thursday	24-Nov		
Week 15	Tuesday	29-Nov	Project 2 - paper discussion	Mammal Lab 3 & Quiz
	Thursday	1-Dec	In-class Exam Review	
Week 16	Tuesday	6-Dec	Lecture Exam 2	No Lab
Week 17	TBA	TBA	No lecture	Lab Practical 2