

BIOLOGY 488: ANIMAL BEHAVIOR LABORATORY: SYLLABUS

Dr. Sylvia Halkin

Room 336 Copernicus, phone 832-2651, e-mail HalkinS@ccsu.edu

Office Hours: Mon. 10:30-11:30, Weds. 2-5, Thurs. 11-12, and gladly by appointment at other times.

Course Objectives: The primary objective of this course is to learn about animal behavior through direct observation and experimentation. We will conduct laboratory and field exercises to test hypotheses about the development, adaptive function, evolution, and physiological control of behavior of vertebrates and invertebrates. Through trouble-shooting and conducting these exercises, and reading related primary literature research articles, students will gain experience with methods used in descriptive and experimental studies, including research design, data collection, and simple statistical analysis of data.

Texts: Ploger, Bonnie J., and Yasukawa, Ken, editors. 2003. Exploring Animal Behavior in Laboratory and Field. Academic Press, San Diego, CA.

(I will also have available the accompanying Instructor's Manual: Ploger, Bonnie J., and Yasukawa, Ken, editors. 2003. Teaching Animal Behavior in Laboratory and Field.)

Course Prerequisite: Biology 200 and 290 or permission of the department chair.

Grading: You are expected to attend all class meetings unless you are seriously ill or are offered a week-long internship studying the behavior of ravens in Maine. Excessive absences will lower your grade. If you miss any classes, you are responsible for making up the work: this may involve different work than what was done in class.

Lab exercise presented by student, including leading discussion of primary literature journal article, troubleshooting the lab, leading the class in conducting the lab, analyzing and presenting the data, leading a discussion of possible modifications to the lab, and applying those modifications	50%
Lab participation, including helping other students to plan and set up labs, conducting those labs, writing questions to prepare for discussions of primary literature articles, and participation in discussions	<u>50%</u>
	100%

Note: Each student will need to make a number of oral presentations to the class, including the report on the research proposal and reports on lab results.

Most students will work in pairs to present a lab. Graduate students will work with graduate students, and undergraduates with undergraduates.

Course Format: The class will meet for 4 hours each week, with one hour of lecture/discussion and three hours of lab. For labs presented by students, you will have one week to run an initial version of the lab, followed by a discussion of any modifications or improvements that the class thinks might be useful, and a discussion of a related article from the primary literature that all students in the class will have read for that week. The next week, the lab presenter(s) will

present the results of the lab, and if significant modifications have been suggested the class will run a final version of the lab.

Each student or pair of students presenting a lab should meet with me well in advance of the lab to discuss materials and methods, to try to anticipate what will be needed to successfully complete the lab, and to ask me about any aspects of the associated research article that you don't understand.

By two days before class in the week before your presentation, you should provide me with a copy of the primary literature article you would like the class to read in association with your lab. This will be handed out in class that week, and for class the next week, each student should have read the article and should bring to class three written questions for discussion. These will be handed in after the discussion and should relate to details of research methodology and data analysis, and how the article relates to the lab.

Preparation for field exercises: Many labs will involve field trips to local areas. Dress appropriately for the weather: wear lightweight clothes and sunglasses or a hat with a brim in hot weather. In cold weather, dress very warmly, in layers: the temperature will feel about 20 degrees Fahrenheit colder when you are sitting still watching animals, than when you are walking around. Wear a hat, warm gloves that you can write with, warm socks, and warm shoes or boots. Wear clothes that can get a little muddy or grass-stained, and shoes that are comfortable for walking and protect your feet from spiky plants that they may encounter. Bring rain gear if it seems likely to rain.

There are just a few potential hazards in the field, which you can easily learn to avoid. In the first lab, you will learn what poison ivy looks like: avoid contacting it. Until temperatures drop below about 50° F, it is a good idea to use insect repellent containing DEET (this will always be available in the lab) to repel ticks and mosquitoes. Just be sure not to get it on anything plastic, as DEET dissolves plastic. Within 12 hours of lab, take a thorough shower (wash your hair, too) and check for any ticks on your body or clothing (if a tick is biting you, grasp it with your fingers as close to your skin as possible and pull gently while wiggling it back and forth: this should allow you to remove it). Don't wear the same clothes again until they have been washed. Know what the bull's-eye rash of Lyme disease looks like, and be sure to see a physician right away for treatment if you develop this rash or other symptoms of Lyme disease (e.g., persistent headaches and swollen, painful joints). Finally, if you know that you are severely allergic to bee or wasp stings, let me know, and be sure to bring your epi-pen on all field trips. We are very unlikely to be stung, but if you are highly allergic you should be prepared just in case.