BIOLOGY 443L ECOLOGICAL ANIMAL PHYSIOLOGY LABORATORY
SPRING, 2004
Course Syllabus

MEETING PLACE: Life Sciences 3
MEETING TIME: Thursday, 12:00 - 5:00 PM

INSTRUCTOR: Dr. William Mautz
Life Sciences, room 6 (LS 6)
974-7357
Office Hours: 10:50 - 12:00 T, 10:00 - 12:00 F, or by appointment

TEXTBOOK: Animal Physiology, Adaptation and Environment, by Knut Schmidt-Nielsen, 5th edition.

PREREQUISITES: Concurrent or previous enrollment in the lecture course (Biol. 443).

COURSE STRUCTURE: A laboratory and field course to provide students with practical experiences of the eco-physiological concepts discussed in the lecture course (BIOL 443). The first set of laboratory exercises will introduce students to the techniques for making physiological measurements in the laboratory and in the field. During the latter weeks of the semester, students will have the opportunity to use these techniques in group research projects in the laboratory or field. Students will gain experience in experimental design, data analysis, and report writing.

Grading will be based on a weekly assignment of 1) questions about the laboratory exercise or analysis of results that week, and these assignments will be due the following week; 2) a laboratory notebook recording your notes and data from experiments; and 3) four laboratory reports over the course of the semester. Laboratory reports will be based on more than one laboratory period and they are due one week following the last laboratory period of data collection for that report. Late question sets and preliminary writings (weekly assignments) and laboratory reports will lose one point per day overdue. Laboratory reports will be worth 50 points each, lab notebook entries for a series of sessions leading up to each lab report will be worth 10 points, and weekly assignments will be worth 10 points. This course is designated "writing intensive," and you will have the opportunity to re-write laboratory reports if you choose to do so.

Students are responsible for participation in all the laboratory exercises. In some cases, this may require coming in to work on a project outside of regularly scheduled laboratory hours. For some laboratory sessions, we will be going into the field. The schedule may vary, but I will announce field trips in advance. For field trips, you will need: 1) closed-toed shoes such as hiking boots or running shoes (no slippers); 2) drinking water; 3) a field notebook; 4) raincoat and sunscreen as the weather may be unpredictable and rainy or hot or cold. When we go to tide pools along the ocean, prepare to wade with swimsuits and reef shoes or old clothes and shoes you do not mind getting wet with sea water.

Special note for spring, 2004: enrollment for this laboratory class doubled this year, and available equipment and space is limiting. I will do my best to accommodate this change, but in order to do so, the structure of the course may change as we go from week to week.

Note for students with special needs. Any student with a documented disability who would like to request accomodations whould contact the University Disability Services Office -Campus Center Rm 311, 933-0816 (V), 933-3334 (TTY) - as early in the semester as possible.

BIOLOGY 443L LABORATORY SCHEDULE

1.	Jan 15	Temperature Measurement: environment and organism
2.	Jan 22	Thermoregulatory Processes in the Laboratory
3.	Jan 29	Field Thermoregulation
	Jan 30	**Last date for CR/NC changes**
4.	Feb 5	Solute Measurement: environment and organism
5.	Feb 12	Aquatic Osmoregulatory Processes
6.	Feb 19	Terrestrial Osmoregulatory Processes
7.	Feb 26	Metabolic rate measurement
8.	Mar 4	Factors influencing the cost of living
	Mar 5	**Last date to withdraw from courses**
9.	Mar 11	Ecological Energetics: feeding ecology
10.	Mar 18	Ecological Energetics: dietary energetics
	Mar 22-26	**Spring Break**
11.	Apr 1	Group Projects
12.	Apr 8	Group Projects
13.	Apr 15	Group Projects
14.	Apr 22	Group Projects
15.	Apr 29	Group Project