

EFB 462/662 - ANIMAL PHYSIOLOGY: ENVIRONMENTAL & ECOLOGICAL
3 CREDITS
FALL 2007

Introduction to the Course

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<i>Course web site:</i>	www.esf.edu/efb/turner/efb462/efb462.htm
<i>Office Hours:</i>	T Th 8:30-10:00 AM T Th 1:30-3:00 PM W 8:30-11:00 AM
<i>Lecture:</i>	140 Baker Labs T Th 11:00-12:250
<i>Textbook:</i>	<i>Animal Physiology. Adaptation and Environment</i> 5th edition Knut Schmidt-Nielsen

About this course: This is a course in the physiology of animals, or, to use a common phrase, how animals work.

Animals are, at root, machines, and the aim of the science of physiology is to understand how these machines function—how they are driven, how they operate, how the various systems they comprise interact, and what physical and chemical constraints govern their operation.

This course is intended to help you understand how animals work as integrated units, *i.e.* as organisms. We will be concerned with how organisms' various organ systems work to accomplish the task keeping an animal alive, with how these systems are coordinated, and how the various types of animals, despite their disparate evolutionary starting points, solve common physiological problems. Details of the lectures are provided in the course calendar, given to you in a separate handout.

Preparation for this course: This is a senior-level course. I presume that you come into it with the background in chemistry, physics, mathematics and biology that a senior biology student can reasonably be expected to have. I will draw heavily from that background, so if you feel the things you learned in these introductory courses have long been forgotten (a not uncommon occurrence), you may wish to dig up your old biology, chemistry and physics textbooks and notes, and refresh your memories.

Lectures: This is a lecture course only. There is no laboratory. We will meet for lectures Tuesdays and Thursdays. The schedule of topics and assigned readings are given in a separate handout, available at <http://www.esf.edu/efb/turner/efb462/calendar.pdf>. In the lectures, we shall often use the text as a starting point to develop topics that are more current or important than the readings might indicate. To follow the lectures, you will need to have the foundation laid by the text readings. For this reason, you are *strongly urged* to complete the readings *before* the accompanying lecture.

On-line facilities: I try to use the web as much as possible in this course. News, announcements, homework questions, self-study questions, and so forth will be posted at the course home page (<http://www.esf.edu/efb/turner/efb462/efb462.htm>). Because we will very likely stray from the calendar during the semester, the course home page will serve as the “official” record for exam dates, due dates, homework postings and so forth. Please bookmark this page and visit it frequently.

- *Supplementary Essays:* To supplement the textbook readings and lectures, I will be posting several supplementary essays through the semester. In these you will find more detailed explanations of the various topics we cover. You will be responsible for the material in these essays.
- *Study questions:* As we progress through the semester, I will be posting lists of questions that will help guide your study. About a week after a set of questions is posted, I will post a set of model answers. To get the benefit of these questions, you are urged to attempt to answer the questions before you consult the model answers.

Evaluation: At the end of the semester, you will be assigned a grade of A,B,C,D or F. Please be advised that I do not assign (+) or (-) modifiers to my grades.

Your final grade will be assigned on the basis of two criteria:

- (1) *performance on semester exams.* There will be two semester examinations. There will be no comprehensive final examination. Neither examination will be cumulative, *i.e.* each will cover the material in the first, or second half of the semester. Each examination will count for 30% of the total points, or together 60% of your final grade. Dates for the exams will be posted on the course web site.

(2) *performance on quizzes.* There will be weekly short quizzes given during the semester. Cumulatively, these quizzes will count for 40% of your final grade. I will drop the lowest score is dropped in calculating the semester total.

To summarize, the point breakdowns are:

Lecture examinations	60%
Lecture quizzes	40%
TOTAL	100%

Course Policies: Please take note of these policies for missed quizzes and exams, exam coverage, etc.

- *Policy on missed quizzes:* Occasionally, you will not be able to be in class on the day a quiz is given. If the absence is unavoidable, that is if it arises from illness, a family emergency or other issue that is beyond your control, the missed quiz will be waived in the calculation of the final grade. To qualify as an excused absence, you must provide me with an excuse from Mr Slocum. If your absence is under your control, or if I do not have certification from Mr Slocum that your absence is excused, a score of zero will be entered for the missed quiz. If no further quizzes are missed, the score of zero will be dropped as your lowest quiz.
- *Policy on missed examinations:* The dates of the lecture examinations will be set roughly two weeks before the examination date. You are expected to take the exam on the specified date. If you miss the examination because of an excused absence, *you must notify me on or before the exam date. **Ex post facto excuses will not be accepted.*** Your absence must also be certified by Mr Slocum. If these conditions are not met, a score of zero will be entered for the missed examination.
- *Policy on recording lectures:* You are welcome to record lectures, but please ask my permission to do so. I will also attempt to post recordings of lectures on the course web site.
- *Scope of quizzes and examinations:* Anything in the text readings, the supplemental essays, the study questions or lectures may appear in the quizzes or exams.

If you are a graduate student enrolled in EFB 662: EFB 662 is intended for graduate students who wish to have a refresher or first course in animal physiology, and still receive graduate credit for it. Effectively, this means you will be expected to attend all lectures, complete all the work assigned to the undergraduates. Points earned in this way will constitute 80% of the total points for your grade. You will earn the remainder of your points through a special topics project.

Your special topics project will be determined in consultation with me. Once we have agreed upon a special topics project, you will submit a written special topics proposal (essentially a study / evaluation plan) that will be used as a yardstick for evaluating your special topics project. *The special topics proposal must be completed and submitted in the first three weeks of the semester.* The special topics proposal will count for 25% of the extra points you must earn (or 5% of your overall grade). Your special topics project will be evaluated on the basis of my judgment how well you have met the agreed-upon goals in the study plan. The special topics project will count for 75% of the remaining points you must earn (or 15% of your overall grade).

To summarize, the point breakdown for EFB 662 will be as follows:

Lecture examinations	$60\% * 0.8 = 48\%$
Lecture quizzes	$40\% * 0.8 = 32\%$
Special topics proposal	5%
Special topics project	<u>15%</u>
TOTAL	100%

You will then be graded on the same numerical scale as the undergraduates.