

## Syllabus: Physiology for Ecologists, Spring 2015

### 1. Course Information

Course Number: PCB 6377

Credit hours: 3

Meeting Times: Mondays 4<sup>th</sup> period, Wednesdays 4-5<sup>th</sup> periods

Location: 521 Carr Hall

Required materials: None. All readings will be provided.

Instructor name and contact information:

Jamie Gillooly

409 Carr Hall

Tel.: 392-2743

Email: [gillooly@ufl.edu](mailto:gillooly@ufl.edu)

Office Hours: by appt.

### 2. Course goals

To better understand: *a*) how individual-level physiology affects and is affected by ecological phenomena across the diversity of life (both plants and animals), *b*) the physiological linkages across levels of biological organization, *c*) how, in the context of evolution, organisms exhibit similarities and differences in their basic physiology, and *d*) how basic principles of physiology may inform students' individual research.

### 3. Course Structure

On Mondays, we will begin with a brief lecture related to the reading material, and then discuss the readings for that week. Readings each week will generally consist of background material on the physiological topic to be covered, and 1-2 scientific papers that apply this area of physiology to ecological questions. Readings will be provided one week in advance. Class on Wednesday will be devoted to discussion and feedback on the research projects described below.

### 4. Expectations/Evaluation

Students are expected to attend all class sessions. For lecture and discussion each Monday, students are expected to complete all readings and come prepared with questions for the group. Participation in discussion is expected by all students each week. In addition, each student will be asked to lead 2 discussions over the course of the semester. These will entail brief presentations to introduce the papers and set-up the discussion.

For the research project, students are expected to complete a fully-referenced scientific manuscript of original research of approximately 1500 words. This project will then be shared in a brief presentation to the class at the end of the semester. Research topics will be decided upon by the professor, with significant input from the student. Grades will be determined as follows:

30 % Discussion Participation and Preparation

40 % Research Paper

30 %: Presentations (1 project presentation, 2 discussion leader presentations)

## Grading Scale

Point Range (%)	Letter Grade	GPA equivalent
≥ 90.00	A	4.0
86.7 – 89.9	A-	3.67
83.3 – 86.6	B+	3.33
80.0 – 83.2	B	3.0
76.7 – 79.9	B-	2.67
73.3 – 76.6	C+	2.33
70.0 – 73.2	C	2.0
66.7 – 69.9	C-	1.67
63.3 – 66.6	D+	1.33
60.0 – 63.2	D	1.0
56.7 – 59.9	D-	0.67
< 56.7	E	0

## 5. Course Outline (subject to change)

Week	Topic
1	Introduction/Planning
2	Introduction to Physiological Ecology
3	Energetics 1: The Basics of Metabolism
4	Energetics 2: Survival, Growth and Reproduction
5	Thermal Biology 1: Temperature Effects on Biological Rates/Times
6	Thermal Biology II: Temperature adaptation and acclimatization
7	Water and Osmotic Balance I: Plants and Animals
8	Water and Osmotic Balance II
9	Nutritional Ecology I: Feeding and digestion
10	Nutritional Ecology I: Ecological Stoichiometry
11	Stress and Organism Function
12	Stress and Life History (first draft due)
13	Sensory Physiology I
14	Sensory Physiology II (final research presentations)
15	Synthesis (final papers due)

## UF Counseling Services

- Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
  - UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
  - Career Resource Center, Reitz Union, 392-1601, career and job search services.
- Many students experience test anxiety and other stress related problems. “A Self Help Guide for Students” is available through the Counseling Center (301 Peabody Hall, 392-1575) and at their web site: <http://www.counsel.ufl.edu/>.

### **Honesty Policy**

- All students registered at the University of Florida have agreed to comply with the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."
- In addition, on all work submitted for credit the following pledge is either required or implied: "*On my honor I have neither given nor received unauthorized aid in doing this assignment.*"
- If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at:  
<http://www.dso.ufl.edu/judicial/procedures/academicguide.html>.

### **Accommodation for Students with Disabilities**

- Students who will require a classroom accommodation for a disability must contact the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). Please see the University of Florida Disability Resources website for more information at: <http://www.dso.ufl.edu/drp/services/>.
- It is the policy of the University of Florida that the student, not the instructor, is responsible for arranging accommodations when needed. Once notification is complete, the Dean of Students Office of Disability Resources will work with the instructor to accommodate the student.

### **Software Use**

All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.