

# ZOO 4926 – The Physiology of Environmental Change

Spring, 2018

## I. Class Meeting Times and Location

Days/ Times: Tuesdays; Periods 5-6  
Thursdays: Period 6

Location: Chemical Engineering, Room 316

## II. Instructor

**Dr. James Gillooly**  
Department of Biology  
Office: 409 Carr Hall  
Office Hours: Friday, 10:30 am -11:30 PM or by appointment  
E-mail: [gillooly@ufl.edu](mailto:gillooly@ufl.edu)

## III. Course Goals, Structure and Expectations

### A. Course Goals and Structure

To better understand: *a)* basic individual-level physiology in a comparative context. *b)* how basic physiological processes are affected by various types of environmental change.

During the first period of each week, we will begin with a brief lecture on basic physiological processes, and more broadly, the structure and function of animals. This lecture will correspond to assigned readings from the textbook. For the next ½-1 period, we will discuss 1-2 scientific papers that address how environmental change is affecting the physiological process under study. The final portion of the class each week will be devoted to group research projects.

### B. Course Expectations.

Students are expected to attend all class sessions. For lecture and discussion, 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 group research projects, students are expected to work to complete a fully-referenced scientific manuscript 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. All topics will address how environmental change is affecting the physiological of organisms.

## IV. Course Resources

### A. Textbook

*Physiological Ecology: How Animals Process Energy, Nutrients and Toxins*. 2007. W. Karasov and C. Martinez del Rio

### B. Course Website (e-Learning)

Class material including the syllabus, lecture slides, and other information related to the course will be posted on the course e-Learning website (<http://lss.at.ufl.edu>). The course is found under “e-Learning in Canvas”. Students are responsible for **all** announcements made in lecture and/or posted on the course website for this class. For help with e-Learning, call the UF Computing Help Desk at 352-392-4357, or visit the e-Learning support website: <https://lss.at.ufl.edu/help.shtml>.

## V. Assessments and Grading

A. Grades will be determined based on the following:

Assessment	Total Point	% of Total Points
Discussion Participation and Preparation	100	25
<i>Presentations</i>	100	25
Research Project	200	50
<b>TOTAL</b>	<b>400</b>	<b>100.00</b>

Minimum grade cutoffs are listed below. These cutoffs will not be raised; in other words, if you receive 90% of the possible points, you are guaranteed to earn an A grade. Final scores will NOT be rounded (i.e., 89.99% is not 90%). There will be no late research papers accepted. Attendance will be considered as part of the participation grade, except in extenuating circumstances.

Point Range (%)	Letter Grade
≥ 90.00	A
≥ 86.66	A–
≥ 83.33	B+
≥ 80.00	B
≥ 76.66	B–
≥ 73.33	C+
≥ 70.00	C
≥ 66.66	C–
≥ 63.33	D+
≥ 60.00	D
≥ 56.66	D–
< 56.66	E

Note that the current UF policy for assigning grade points is available at the following undergraduate catalog web page: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

## VI. Academic Honesty

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: <https://catalog.ufl.edu/ugrad/current/advising/info/student-honor-code.aspx#honesty>.

## VII. Time Commitment

The UF College of Liberal Arts and Sciences assumes that each student will devote 3-4 hours per week per credit-hour to each course, including class time. As this course is 3 credits, each student should therefore expect to devote 9-12 hours per week to this course. A recommended time allocation is below.

If you find yourself spending more than 12 hours per week on average for the class, please discuss this with your course instructor. If you find yourself spending less than 9 hours per week on average, you should recognize that you may have difficulty learning and comprehending the material in this time, which could affect your grade.

## VIII. Accommodations 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/drc/>. Note that the student should provide documentation of a requirement for accommodation **by the second week of classes**. No accommodations are available to students who lack this documentation. 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.

## IX. Counseling Center

Many students experience test anxiety and other stress related problems. "[A Self Help Guide for Students](#)" as well as a diverse array of support systems are available through the UF Counseling and Wellness Center (3190 Radio Road, 392-1575, <http://www.counsel.ufl.edu/>).

## X. Lecture/Discussion Schedule

Lecture topics for this course are listed below. Each week, following a brief, interactive lecture on these topics, students will read 2 papers on how they relate/apply to various aspects of environmental change. This is a tentative schedule, which is subject to change.

Introduction/planning

Introduction to Physiological Ecology

Energetics I: The basics of metabolism

Energetics II: survival, growth and reproduction

Thermal Biology I: Temperature effects on biological rates/times

Thermal Biology II: Temperature adaptation and acclimatization

Water and osmotic balance I: Plants and animals

Nutritional Ecology I: Feeding and digestion

Nutritional Ecology I: Ecological Stoichiometry

Stress and Organism Function

Stress and Life History

Sensory Physiology

Sensory Physiology II

Synthesis: plants vs animals

Synthesis: plants vs animals II