

Syllabus: Comparative Physiology
Florida International University, Department of Biological sciences
PCB 4724, Fall 2010

Class number: 88986

Instructor: Fernando Gabriel Noriega

Web page Course: <http://www.fiu.edu/~noriegaf/NoriegaClass.htm>

Lectures: Tuesdays-Thursdays 9.30 AM-10.45 AM

Room: ECS 145

Office: 218 B HLS (Health and Life Science Building)

Phone: 305-348 6632

Email: noriegaf@fiu.edu

Office hours: Thursdays 1 PM- 4 PM

Prerequisites: General Biology I and II, Organic Chemistry I

Course Objectives: To use a comparative approach to study how physiological processes in groups of unrelated animals have evolved to cope with similar environmental challenges.

Text: Animal Physiology, Hill, Wyse and Anderson. 2008, 2nd edition. Sinauer Associates, MA. ISBN 0-87893-317-4. **REQUIRED**

Grading: There will be a total of 100 combined earnable points.

- 30 points will come from Quizzes.
- 10 points will come from a paper.
- 30 points will come from a Midterm exam.
- 30 points will come from a Final exam.

Quizzes: There will be a short quiz during the first 10 minutes of most classes. If you are late, the time is lost. Each quiz is a single question that you must answer with a short and concise paragraph. You will be permitted to drop 20% of quiz scores in determining your final quiz grade, so the 80% highest quiz scores will be used to determine your quiz grade. The quizzes will cover material from the lectures and the assigned reading.

Papers: Write and present a paper on topic and format to be discussed.

Midterm and Final exams: they will consist of written answers to questions in the same format as the daily quiz.

Numeric Grade Equivalents:

A = 90% - 100% (89= A-)

B = 80% - 88% (79= B-)

C = 70% - 78% (69= C-)

D = 60% - 68%

F = Below 60%

Lecture and Activities Schedule (subject to change)

Date	Topic	Required Reading
Tu 8/24	Introduction (1)	Chapter 1
Th 8/26	Fundamentals of Physiology (2)	Chapter 2
Tu 8/31	Fundamentals of Physiology (3)	Chapter 4
Th 9/2	Comparative Physiology in the post-genomic era (4)	Chapter 3
<i>II. Food, Energy and Temperature</i>		
Tu 9/7	Nutrition and feeding (5)	Chapter 5
Th 9/9	Digestion (6)	Chapter 5
Tu 9/14	Energy Metabolism I (7)	Chapter 6-7
Th 9/16	Energy Metabolism II (8)	Chapter 7-8
Tu 9/21	Thermoregulation I (9)	Chapter 9
Th 9/23	Thermoregulation II (10)	Chapter 9
<i>III. Integrating Systems</i>		
Tu 9/28	Neurobiology I (11)	Chapter 11,12
Th 9/30	Neurobiology II (12)	Chapter 11,12
Tu 10/5	Sensory physiology (13)	Chapter 13
Th 10/7	No Class	
Th 10/12	MIDTERM EXAM (14)	Chapters 1-13
Tu 10/14	Endocrinology I (15)	Chapter 15
Th 10/19	Muscle (16)	Chapters 18-19
Tu 10/21	Paper discussion (17)	
Th 10/26	Paper discussion (18)	
<i>IV Muscle</i>		
Tu 10/28	Paper discussion (19)	
Th 11/2	Paper discussion (20)	
Tu 11/4	Paper discussion (21)	
<i>V. Gas exchange and internal transport</i>		
Th 11/10	No Class	
Th 11/16	Respiration (22)	Chapter 21,22
Tu 11/18	Circulation (23)	Chapter 23,24
<i>VI. Water, Salt and Excretion</i>		
Th 11/23	Water and salt physiology 1 (24)	Chapter 26
Tu 11/30	Water and salt physiology 2 (25)	Chapter 27
Th 12/2	Excretion (26)	Chapter 28
Tu 12/7	FINAL EXAM 9.45-12.30	Chapters 15-28