PSYC 4130 - Physiological and Comparative Psychology

University of Georgia, Spring 2013
Miller Learning Center Room 250 T/TH 2:00 - 3:15

Instructor: Desiree I. Sharpe
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Office: Psychology 441
Office hours: by appointment

Required Text:
Carlson, N.R. (2012). *Physiology of Behavior* (11th Ed.). Pearson Education.
ISBN: 9780205239399 OR 1256778176

Supplemental journal articles will be posted on eLearning Commons or provided in class.

Prerequisite or Corequisite Courses: PSYC 2990 or PSYCH 3990

Course Description & Objectives

WELCOME!
Why study the brain? Well, without one you wouldn't be able to ask, much less answer, that question. At this point in your academic career, you probably have been told that the brain is the processing center for life. You cannot see, hear, taste, touch, nor feel without a brain. You cannot speak, experience pain and pleasure, ask questions, form memories, nor learn new information without a brain. The brain not only is important for sustaining life, in many ways it IS life --- all knowledge of the world and the actions that you perform in it must be processed by the three pound mass nested safely in your skull, tucked between your two ears, residing atop the rest of your body.

In this course, you will learn about the neural substrates of human and nonhuman animal behavior. By the end of the semester, you will be able to identify many important brain structures, understand the action potential and other aspects of neurophysiology, name many of the hundreds of neurochemicals that flow through your neural networks, understand some of the pathways from sensation to perception, and make connections concerning similarities and differences with regard to neural structures among a wide variety of animal taxa.

From the Master Syllabus: This course covers the biological bases of human and nonhuman behavior, with emphasis on underlying physiological mechanisms, and on the development, evolution, and function of behavior.

By the end of the course students should have learned:

1. Some of the historical, philosophical, and methodological issues associated with behavioral neuroscience
2. Some of the methods used in the study of behavioral neuroscience
3. Some of the fundamentals of neuroscience
4. Some general and recent knowledge regarding behavioral neuroscience
5. Some general and recent knowledge regarding study of animal behavior
6. The laboratory component of this course will provide the student with in depth exposure to basic neuroanatomy, and comparative animal behavior and will illustrate principles of sensory processing that supplement material presented in class

Course Format & Evaluation

This course primarily is lecture-based. The class will be conducted in a "modular" format, which means that I have grouped together chapters, articles, and supplementary material that focus on a similar aspect of neuroscience. Each module builds upon the previous modules, ultimately creating a holistic framework for you to successfully identify neural substrates of behavior. Upon completion of each module, you will take an exam* comprised of multiple choice, short answer, and essay questions.

**If you are aware that you will be absent on an exam day, you must notify my ONE WEEK in advance, and we will arrange for you to take the exam on a different date. If you miss an exam due to an illness or emergency, I will need documentation such as a doctor's note, copy of a speeding ticket, search warrant (kidding!), etc.*

Concerning attendance and class participation, there is no formal attendance policy. This is *your* education, so feel free to do with it what you see fit. From personal experience, I can tell you that I've always felt better about the work I did in the courses I showed up to, and I hope you all do well in my class. I appreciate an email letting me know when you will be absent. I do, however, monitor your attendance with the use of pop quizzes. The quizzes will be based on the reading material; I will let you know in advance what I expect you to read for the quizzes. ***There will be no make-ups for quizzes.***

Thus, the point breakdown(!) and grading scale(!) are as follows:

3 Exams (100 points each)	300 pts.
1 Final Exam (200 points)	200 pts.
10 Pop Quizzes (10 points each)	100 pts.
Total points possible:	600 pts.

553 - 600	A
540 - 552	A-
517 - 539	B+
499 - 516	B
480 - 498	B-
457 - 479	C+
439 - 456	C
420 - 438	C-
397 - 419	D+
379 - 396	D
360 - 378	D-
359 & below	F

If you have a disability and require reasonable classroom accommodations, please see me after class or make an appointment.

Incomplete Grades

A grade of incomplete is only assigned in extremely unusual circumstances. Such situations require extensive documentation and approval of faculty supervisors. It is only an option if a student is passing the class and is typically only awarded when a student has completed the majority of the classwork and is only missing one or two exams or assignments. If a grade of incomplete is approved, a written plan for completion of the coursework must be developed by the instructor and student and approved by the faculty supervisor.

Academic Honesty

All academic work must meet the standards contained in "A Culture of Honesty" (http://www.uga.edu/ovpi): The UGA Student Honor Code maintains that you will be academically honest in all of your academic work and will not tolerate academic dishonesty of others. Students are responsible for informing themselves about those standards before performing any academic work. Questions related to course assignments and the academic honesty policy should be directed to the instructor. Basically, don't cheat. Just don't do it.

Course Schedule

Date		Topic	Readings
January	8th	Syllabus Day	
	10th	MODULE 1: *Structures, Cells, & Chemicals*	
		Functional Neuroanatomy	Chapter 3
	15th	Functional Neuroanatomy	
	17th	Neurophysiology	Chapter 2
	22nd	Neurophysiology	
	24th	Neurotransmitters	
	29th	Neuropharmacology	Chapter 4
	31st	*Review*	
February	5th	**EXAM #1**	
	7th	MODULE 2: *Sensation & Perception*	
	12th	Vision	Chapter 6
	14th	Vision	
	19th	Audition	Chapter 7
	21st	Vestibular System, Taste, & Smell	
	26th	Movement	Chapter 8
	28th	*Review*	
March	5th	**EXAM #2**	
	7th	Guest Lecturer	
		~ SPRING BREAK ~	
	19th	MODULE 3: *Hormones, the Body, & Behavior*	
		Hormones & Behavior	
	21st	Reproductive Behavior	Chapter 10
	26th	Reproductive Behavior	
	28th	Emotion	Chapter 11
April	2nd	Learning & Memory	Chapter 13
	4th	Learning & Memory	
	9th	Clinical Neuropsychology	
	11th	Schizophrenia & Autism	Chs. 15/16
	16th	Anxiety Disorders	Chapter 17
	18th	*Review*	
	23rd	**EXAM #3**	
	25th	Final Exam Review and Last Day of Class	
May	2nd	**FINAL EXAM (3:30-6:30 PM)**	

** The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.*