COURSE INFORMATION

Course Number/Name	Biology 4300/5300 Neurobiology
Section	1
Date/Time/Location	Fall 2007/MW 11-12:15/SUPP 116
Professor Name/Office –	Dr. Dana M. García
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COURSE DESCRIPTION

In this course students will get an overview of neuroscience, particularly the areas of neuroanatomy, neurophysiology, and evolutionary and developmental neurobiology.

Prerequisite: BIO 2450 with a grade of "C" or higher.

Recommended: BIO 3300 or BIO 4441

COURSE OBJECTIVES

- To familiarize students with the topics in neuroscience described above, with a particular emphasis on cellular mechanisms
- To hone students' analytical, creative and practical skills and knowledge, particularly as they pertain to neurobiology
- To think critically about the construction of knowledge both by examining how we've come to our current state of knowledge about neuroscience (what sorts of experiments were involved) and observing the multicultural construction of knowledge by recognizing who has contributed to our understanding.
- To increase students' awareness of the diversity of scientists who have contributed to our current understanding of neuroscience and of their own potential for contributing to the field

REQUIRED TEXT: Neuroscience 4th ed. by Purves, et al.

ASSESSMENT

One of my jobs as professor is to evaluate your mastery of the skills and content of this course and ideally your ability to think critically and practically about the material we cover. In other words, can you apply what you've learned to novel situations? Students acquire knowledge in different ways and they convey what they've learned in different ways. Accordingly, students' grade in this course will be determined by a variety of assessment approaches, including brief in-class quizzes and in-class minute papers (sampling from a subset of the class) and in class multiple choice exams for all. Students are invited to submit questions for the multiple choice exams. In past semesters, I have modified students' questions and used them on the exam. At the end of the course, we will also have a multicultural assessment in which you will be asked about the involvement of different cultural groups in science.

ASSIGNMENTS, GRADING SCALE AND DUE DATES

ASSIGNMENTS	POINTS	DATE OR DATE DUE
Find a neuroscience-related, journal article whose author shares your family name	5 pts	August 29
Minute papers	3 pts each	Surprise/Pop
Pop quizzes	3-5 pts each	Pop
Exams	100 pts each	See schedule below.

Assignment of letter grades will be as follows: A = 90 to 100, B = 80 to 89, etc. Minute papers and pop quizzes will figure in as "extra credit" on the exam immediately following them, but the upper limit of the exam score is 100 pts.

Date	Topic	Relevant Chapters
8/22	Introduction to the course and overview of the nervous system	1
8/27–9/5	Electrical signals, membrane permeability, channels and transporters	2-4
9/10-12	Synaptic transmission	5
9/17-19	Neurotransmitters, neurotransmitter receptors and their effects	6-7
9/24	Synaptic plasticity	8
9/26	**Exam I**	
10/1-3	The somatic sensory system and pain	9-10
10/8-10	Vision and central visual pathways	11-12
10/15-17	The auditory system	13-14
10/22-24	The chemical senses	15
10/29	**Exam II**	
10/31-11/5	Lower motor neuron circuits and motor control	16
11/7-12	Upper motor neuron control of brainstem and spinal cord	17
11/14	Modulation of movement	18-19
11/19	**Exam III**	
11/26-12/3	Brain Development	22-25
12/10, 11-1:30	**Final Exam**	

UNIVERSITY and COURSE POLICIES

Withdrawing from the course. The automatic "W" date is 10/23/06; students dropping after that date will be assigned a "W" if they are passing the course, or an "F" if they are failing. Students are encouraged to consult with Dr. García prior to dropping.

Attendance Policy. Attendance of lectures is the responsibility of the student. (1) Success in a course is generally correlated with attendance, (2) part of your assessment is based on "pop" assignments, and (3) Murphy's law indicates that all extra credit and tips for the

exam will be given on the one day that YOU are absent.
Honor code violations. University policies regarding academic dishonesty, including definitions and disciplinary actions, can be found at http://www.txstate.edu/effective/upps/upps-07-10-01.html. In addition to other possible disciplinary actions, students caught in an act of academic dishonesty will receive an "F" in the course. Students should be aware that representing someone else's work or thoughts as your own represents plagiarism, even if the appropriate literature citation is given. Students should direct questions relating to academic dishonesty to Dr. García. Anonymous allegations of academic dishonesty will not be investigated. Other allegations will be investigated, and the identity of the accuser will be protected to the extent possible.

ADDITIONAL COMMENTS
“Effective teaching requires teaching individuals.” (Hilberg and Tharp 2002)

Hilberg, R. and R. Tharp (2002). "Theoretical perspectives, research findings, and classroom implications of the learning styles of American Indian and Alaska Native students." ERIC Digest.