PSY 260 - ***Introductory Psychobiology*** San Diego State University Spring 2011

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Required Text: 1) Physiology of Behavior, 10th edition; Neil R. Carlson
2) Custom materials on Blackboard per syllabus.

Course Description

This course introduces you to the biological and structural aspects of the brain and how they influence behavior and cognition. Over the past century, we've learned that the brain is a marvel of specialized parts working together to provide our conscious life with the illusion of a seamless, holographic self. 'Normal' perception is constructed from the contributions from discrete brain areas, each of which parses a different aspect of sensation and movement. These areas in turn are specialized with regard to cell types, connections among cells, and often the biochemical messengers on which cells depend to communicate. The interdependence of these parts on normal perception is easily revealed by the dramatic consequences than can occur in conscious behavior by disconnections between even small areas of the brain, chemically or structurally. This class will introduce you to the basic mechanisms underlying perception and action.

The course moves on to provide a basic introduction to the essential elements of neuroanatomy and neurophysiology. This includes an introduction to neurons, brain organization, and functional specialization of selected brain structures related to language, attention, emotions, spatial awareness, and sensory/motor systems. A section devoted to development will discuss the ontogeny of higher cognitive systems in humans, as well as the role of the early hormonal and behavioral environment in modulating individual genetic heritage. Other specific topics in the course that are broadly considered include sleep, drug responsiveness, sex differences in cognition, social behavior, homosexuality, sleep, and circadian rhythms.

Prerequisites for this class include both Introductory Biology and Introductory Psychology. To be successful, students must synthesize information presented in both the lecture and the readings. There is no attendance taken and the lecture slides will be posted on the website to help you study. However, this is not a substitute for reading the material and coming to class. Aspects of the discussion in class, not in the notes, will be on the exam. Please arrange to obtain the material from another student if you miss class.

Course Schedule

Date	Topic	Assignment	Quiz/Exam
January			
20th	Introduction: Consciousness & Organization of the Nervous System	Chap. 1	
27th	Structure of the Nervous System	Chap. 3	
February			
3rd	Functional Neuroanatomy	Chap. 3	**Quiz 1**
10th	Structure and Functions of CNS cells	Chap. 2	
17th	The Action Potential & The synapse	Chap. 4	
25th	Intellectual/Methodological Advances From the 18th-20th century	Chap. 5	**Quiz 2**
March			
3rd	The Synapse revisited: Effects of Drugs	Chap 18.	
10th	**Midterm 1**		**MID 1**
17th	Sensory Systems	Blackboard Material Chap. 6	
24th	Learning & Memory	Chap. 13	
April			
7th	Hormones: Mechanisms of Actions & Physiological Effects	Chap. 10.	
14th	Sex Differences Behavior: Cognition and Sexual Orientation	Blackboard Material	**Quiz 3**
21st	Emotion and Stress	Chap. 11	
28th	Circadian Rhythms/Sleep and Arousal	Chap. 9	**Quiz 4**

May

5th	Human Communication		Chap. 14
19th	Paper Due in class	**Midterm 2**	**MID 2**

Grading : The average of two midterms will count for 60% of the total grade. The average of the three best quizzes will count for 20% of the grade and the paper will count for the last 20%. *See the example at the bottom of the page to calculate your grade.* ***Exams and quizzes must be taken at the scheduled time (neither early nor late) – please plan your semester accordingly*****. No make-ups are given.**

For all quizzes and exams, you will need a #2 pencil and a narrow or wide Red Scantron answer form, which can be purchased at the bookstore.

Exams**:** Midterms consist of multiple-choice questions. Each midterm will cover only the material since the last midterm (they are *not* cumulative).

Quizzes: Four in-class quizzes will be given as indicated in the syllabus. Each 20-25 question quiz is in a multiple-choice format. Quizzes cover all material covered since the previous quiz. Study questions will be posted on Bb for each quiz, from which at least 80% of the actual in-class quiz questions will be taken.

Writing Activity: One paper is required. Detailed instructions regarding each will be posted on Blackboard. ***This will need to be legibly handwritten.*** No typed papers accepted.

Final Course Grade: Your semester grade will be assigned as follows:

93-100%	=	**A**
90-92%	=	A-
87-89	=	B+
83-86%	=	**B**
80-82%	=	B-
77-79%	=	C+
73-76%	=	**C**
70-72%	=	C-
67-69%	=	D+
63-66%	=	**D**
60-62%	=	D-
less than 60%	=	**F**

Example of grade calculation

Mean of the midterms (70, 90, 80)	= 80 * .60	= 48
Mean of the 4 highest quizzes (80,80,90,90)	= 80 * .20	= 16
Paper grade (87)	= 87 * .20	= 17

Grade = 48 + 16+ 17 = 81 (B-)