COURSE NUMBER Psychology 560

COURSE TITLE Advanced Physiological Psychology

CREDIT HOURS 3 (lecture)

SEMESTER/YEAR Fall 2008

Location of Class Meeting AB4-205

Class Meeting Times TTH 12:30-1:50

Instructor Christopher Wilson, Ph.D.

Office Location AB4, Room 315A

Instructor Contact Information 936-294-3052; Wilson@shsu.edu

Office Hours MWF 10-11 pm; TTH 3-4 pm

Course Description The course is one that considers the input of neural mechanisms in behaviors, how the environment plays a role in changing the brain and how the brain, then, affects behavior. A study is made of neuroanatomical, neurochemical, and neurophysiological mechanisms of such psychological processes as sensation/perception, movement, learning, memory, and emotion. The course also looks at underlying mechanisms for dysfunctions such as the apraxias, the aphasias, Parkinsonism, etc.

Course Objectives

1. To gain an understanding of nervous system structure and function

    Learning outcome: you will be able to locate and identify the areas of the central nervous system and delineate the types of behaviors in which each is involved.

2. To gain an understanding of neurochemical systems within the nervous systems.

    Learning outcome: you will be able to identify the major types of neurotransmitter systems within the brain and the functional/behavioral significance of each.

    Learning outcome: you will be able to predict behavioral abnormalities based upon changes in the levels of particular neurotransmitter substances and to predict changes in neurotransmitter levels based upon changes in behavior.

3. To gain an understanding how sensory information gets from the environment into the brain, how that information is coded and decoded, and how that information can be used to direct behavior.

Learning outcome: you will have a working model of how physical/environmental information is encoded for use by the brain and how the information is processed to turn mere sensation into perception by the brain.

Learning outcome: you will be able to predict various types of perceptual abnormalities based upon damage to particular areas of the brain.

4. To gain an appreciation for the complexity of systems involved in initiating behavioral processes.

Learning outcome: you will be able to show how neural impulses are converted to particular behavioral/muscular movements having an effect on the environment.

Learning outcome: you will be able to determine the primary site of damage occurring with several common (and sometimes not so common) behavioral abnormalities.

Learning outcome: you will be able to predict dysfunctions of communication based upon neural damage and neural damage based upon the type and degree of communication difficulty.

5. To gain an understanding of the role of neural structures underlying psychological phenomena.

Learning outcome: you will be able to demonstrate knowledge of primary mechanisms/systems involved in learning, reward, and drug addiction.

Learning outcome: you will be able to demonstrate knowledge of how information is taken from the environment and how that information is converted to actions by the individual on the environment.

Required Text Bear, Conners, & Paradiso, Neuroscience: Exploring the Brain: Lippincott, Williams & Wilkins, 2007.

Syllabus

August 26- Sep 2	Philosophical Background Research Methods	Chapter 1 Chapters 1-2
Sep 4-9	Microneuroanatomy	Chapter 2
Sep 16-18	Macroneuroanatomy Psychopharmacology	Chapter 7 Chapter 6
Sept 23	Exam 1	
Sep 25- Oct 2	Cell Communication	Chapters 3,4,5
Oct 9-16	Sensation-Vision Visual Dysfunctions associated With Primary Neurological Damage	Chapters 8-10
Oct 21	Exam 2	
Oct 23-30	Motor Systems Motor Dysfunctions associated With Primary Neurological Damage	Chapters 13-14
Nov 4-6	Sleep/Arousal Sleep Dysfunctions	Chapter 19
Nov 13	Exam 3	
Nov 18	Emotion and Motivation	Chapter 18
Nov 20-25	Learning	Chapters 24-25
Nov 27	Thanksgiving Break	
Nov 27- Dec 2	Learning	
Dec 4-11	Human Communication Communication Problems due to Neural Damage	Chapter 20
Final Exam Period	Exam 4	

Grade Policy

There will be four exams in this course and your grade will be determined by the total number of points accumulated on four classroom exams. If you miss an examination, you may take a make-up of that examination, but beware, you may take only one make-up exam during the semester.

In the lecture section of this course, if you miss six classes, your final grade will drop by one letter grade. If you miss ten classes, your grade will drop by two letter grades. If you miss twelve classes, you will receive an F for the semester.

Your grade will be based upon the following schema:

A = 360-400
B = 320-359
C = 280-319

Visitors in the Classroom

Unannounced visitors to class must present a current, official SHSU identification card to be permitted into the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.

Religious Holidays

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. "Religious holy day" means a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20, Tax Code.

Americans with Disabilities Act

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance are expected to visit with the Office of Services for Students with Disabilities located in the Counseling Center. They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If a student has a disability that may affect adversely his/her work in this class, then the student is encouraged to register with the SHSU Counseling Center and to talk with the instructor about how best to deal with the situation. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until the student registers with the Counseling Center.

Academic Dishonesty

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

Attendance Policy:

You are expected to attend every class. If you miss six classes, your final grade will drop by one letter grade. If you miss ten classes, your grade will drop by two letter grades. If you miss twelve classes, you will receive an F for this course.