

Psychology 333
Physiological Psychology
Spring 2008
Monday-Friday 9:00-9:50 am; LDB, Room 216

Instructor: Professor Wilson, Office: AB-4, Room 319, Phone: 4-3052
E-mail: Wilson@shsu.edu

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.

Learning 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.

Grade Policy

There will be four exams in this course and your grade will be determined by the total number of points accumulated on three of four classroom exams and a laboratory exam. 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 addition, you may drop one exam grade for the computation of your final grade.

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

D = 240-279

F = 000-239

Study Tips: The best advice on how to study for this course is to read the material beforehand, listen attentively to the lecture, then review the material very soon after each class has ended. In addition, students with academic difficulty should contact the SAM Center.

Notice to a person with a disability:

It is the policy of Sam Houston State University that no individual otherwise qualified shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic program or activity. Students with a disability which affects their academic performance are expected to arrange for a conference with the instructor as soon as possible. This is so that appropriate strategies can be considered to ensure participation and achievement opportunities are not impaired since there will be **no retroactive accommodation**. Thank you.

Attendance Policy:

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

Text: Pinel, P.J.P. (2008). Biopsychology. New York: Allyn-Bacon.

Syllabus

January 16- January 18	Philosophical Background	Chapters 1,2
January 21- January 30	Research Methods	Chapter 5
February 1- February 8	Microneuroanatomy	Chapter 3
February 11	Test 1	
February 13- February 20	Macroneuroanatomy	Chapter 3
February 25- March 5	Cell Communication	Chapter 4
March 7	Test 2	
March 10- March 14	Spring Break	
March 17- March 24	Sensation-Vision	Chapters 6,7
March 10- March 24	Spring Break	
March 26- April 4	Motor Systems	Chapter 8,10
April 7	Test 3	
April 9- April 14	Sleep/Arousal	Chapter 14
April 16- April 21	Emotion	Chapter 17
April 23- May 2	Learning	Chapter 11
May 5- May 7	Human Communication	Chapter 16
TBA	Final Exam	