II. COURSE DESCRIPTION:
A study of brain function in relation to intelligence, speech, memory, emotions, and visual-spatial abilities, with attention to individual differences in both normal and brain-damaged persons.

III. REQUIRED TEXTBOOKS:

IV. COURSE OBJECTIVES:
The successful student is expected to master the following competencies:

1. Be able to explain the role that philosophy, biology and psychology played in the developmental of Physiological Psychology.
2. Be able to discuss neuroanatomy and neurophysiology.
3. Be able to describe the research methodology in Physiological Psychology.
4. Be able to discuss the role that the nervous system plays in sensory and perceptual processes.
5. Be able to explain the role that the peripheral nervous system plays in emotions.
6. Be able to explain the role the hormones and genetics play in the regulation of behavior.
7. Be able to describe the role that the central nervous system plays in cognitive processes such as learning and memory.

V. STUDENT EVALUATION AND GRADING:
1. There will be one (1) midterm worth 50 points. Consult the syllabus for date of this exam.

2. Each student is responsible for leading one or more seminar(s). Seminar leaders will develop a reading list of 10 to 15 articles and make this reading list available to the rest of the class a week before the seminar. Seminar leaders are responsible for running the seminar and are to be the expert on the topic under discussion.

3. Class Participation: The reading load is quite heavy for this seminar. We will be reading between 10 and 15 articles a week. It is the responsibility of the Seminar leader to provide the reading list and run the seminar. It is the responsibility of the participants to read the assigned articles and come to class prepared to discuss them. Class participation is worth fifty (50) points. In order for class discussions to be successful it is very important that all students read the assigned articles and attend all seminars. Failure to obtain and read these articles and/or attend these seminars will lower your final grade.

4. A term paper is required and it may be on the same topic as your seminar. The term paper will be a
research of the literature on a topic in Physiological Psychology and must be approved by the Professor. The term paper is worth fifty (50) points. All term papers must be typed. No handwritten paper will be accepted. The paper should be about twenty-five (25) pages in length. You will be graded on the style as well as content! The paper must be written in APA format. Although the written report will not be due until April 14th, an early start is advised. NO LATE PAPERS WILL BE ACCEPTED. Good reports of this kind requires a good deal of library research, and generally, organization of a considerable amount of literature. An adequate job simply cannot be done if you put off getting started on the project until the middle of March.

5. The total points that can be earned in this class is 150. Final grades will be determined according to the following schedule:

- A \geq 90\% highest total points
- B \geq 80\% highest total points
- C \geq 70\% highest total points
- F < 70\% highest total points

VI. Course Outline:

Jan. 7 W. Organization

Jan. 14 W. Introduction Ch. 1 pp. 2-24

Jan. 21 W. Neurons and Glia Ch. 2 pp. 27-38

Jan. 28 W. Membrane at Rest Ch. 2 pp. 39-44

Feb. 4 W. Action Potential Ch. 2 pp. 44-49

Feb. 11 W. Synaptic Transmission Ch. 2 pp. 49-62

Feb. 18 W. Neurotransmitters Systems Ch. 4 pp. 109-128

Feb. 27 W. Structure of the Nervous System Ch. 3 pp. 64-90

Mar. 3 W. The Peripheral Nervous System Ch. 3 pp. 90-95

Mar. 10 W. SPRING BREAK

Mar. 17 W. MIDTERM LAST WEEK TO WITHDRAW FROM CLASSES

Mar. 24 W. Biology of Depression (Caroline Cameron)

Mar. 31 W. Alzheimer’s Disease (Costella McKoy)

Apr. 7 W. Schizophrenia (Booker T Foster)
April 14 W. The Neural Basis of Dyslexia (Alfred Gray)

TERM PAPER DUE

April 21 W. Biological Basis of Sex Differences (Tom Van Cantfort)

April 28 W.

VII. TEACHING STRATEGIES:
This is a lecture and seminar course with a library research component.

VIII. BIBLIOGRAPHY:


