I. COURSE SUMMARY

Physiological psychology examines the interactions between the brain and behavior. In this class, we isolate the physiological processes that take place inside the body whenever behavior occurs. The assumption underlying this science is that for every behavioral event—every action, thought or feeling—there is a corresponding physical event or series of events taking place in the body. During this quarter, we will focus on a variety of topics including: the structure and function of neurons, neuroanatomy and function of the brain, behavioral neuroscience, cognitive neuroscience, affective neuroscience, and assorted special topics. By the end of this course, students should be able to think about an organism’s behavior on three levels (cellular, structural, and systems/behavioral).
II. GRADING. There are a total of 400 points available in this class. A 10% grading scale will be used in which students who score over 360 points will earn an ‘A,’ students who score between 320 and 359 will earn a ‘B,’ students who score between 280 and 320 will earn a ‘C,’ and so forth.

Tests (4 Total) = 350
Article Reviews (100 pts) = 50

A. Tests. Four tests will be given throughout the semester. The test format will include fill-in-the-blank, short-answer, and essay questions. The tests will cover the material presented in class and from the book chapters designated on the syllabus. Moreover, each test will include questions that are taken from book material that is not discussed in lectures. Please note that all exam dates are clearly marked on the syllabus, and they will be given on those dates. Students are required to abide by the Kalamazoo College Honor Code for all of their work in this class. Tests 1 and 2 are worth 75 points each and Tests 3 and 4 are worth 100 points each.

B. Article Review Assignments: There are 4 randomly scheduled journal articles readings. For a paper review, the class will self-divide into small groups or pairs of students, and each group/dyad will complete the review sheet. One or two of these review sheets may be completed in class, but to facilitate a meaningful discussion of the article, the majority of the review sheets will be completed out of class before the scheduled class period. The questions on the review sheet will cover information such as the hypothesis, methods, and results of the research. Moreover, key questions will cover the implications of the research, not only for science but for society as well. Please note that spelling, grammar, and economical presentation of material will all be considered in determining the student’s grade. Plagiarism is not tolerated. The article review assignments will range in value from 12 to 15 points for each member of the group.

III. ACCOMMODATIONS.

A. Student Athletes. Student athletes who have university permission to miss classes or tests need to inform the instructor before they miss the assignment.

B. Cultural/Religious Holidays. Kalamazoo College provides reasonable accommodations for observing religious or cultural holidays. Students can be excused from class to participate in these religious/cultural activities, but they will be responsible for getting all assignments and turning in course work. It is the student's responsibility to contact the faculty member in a timely manner to arrange for appropriate accommodations.

C. Students with Disabilities. Kalamazoo College provides reasonable accommodations for students with disabilities. It is the student's responsibility to contact the office of the Dean of Students [337-7209] in a timely manner to arrange for appropriate accommodations.
IV. CLASS RULES.

A. Honor System. This course will operate in accordance with the Kalamazoo College Honor System: a responsibility for personal behavior, independent thought, respect for others, and environmental responsibility. Students who are caught cheating or plagiarizing will receive a zero for that assignment, will be referred to Student Services, and may fail the class. Students who download papers or any information from the Internet without citing the source may receive an F in this course.

B. Attendance. Attendance will not be taken in this class; but students are expected to attend the scheduled classes. Many of the test questions will come from class lectures and are not in the book. It should be noted that students who have been successful in this class in the past have adopted the strategy of reading the book prior to lecture, attending the lecture, and then rereading the text over the corresponding material.

C. Classroom Behavior. The Kalamazoo College Honor Code applies to classroom behavior as well as other types of interpersonal interactions on campus; “respecting others” includes respectful behavior in class. Although Kalamazoo College is committed to respecting fundamental principles of freedom of speech, including even controversial positions taken in class, all types of speech and behavior must be balanced with principles of appropriate classroom behavior. It is ultimately the faculty member who controls the classroom, and if a situation develops in which, in the opinion of the faculty member, the class is being disrupted, the faculty member has the ultimate right to ask a student to leave the class. Longer-term solutions to these problems will be dealt with according to College procedures.

Also, the presence of electronic devices is distracting to the professor and other students. Cell phones should be silenced before class and in-class texting may be met with sarcasm, ridicule, and prolonged verbal abuse.

D. Make-up Policy. If you know that you are going to miss an assignment (test or paper) for any reason, it is the responsibility of the student to contact the professor BEFORE the assignment is due. Makeup assignments may not be given if prior warning (and the professor’s consent) has not occurred.
Physiological Psychology Course Outline
Fall 2012

SECTION #1: AN INTRODUCTION TO PSYCHOLOGY & BEHAVIOR

Week #1: Introduction to Class

Sept 10 (Mon)  Introduction to Class & Field of Neuroscience

Sept 12 (Wed)  Brain Evolution [Breedlove et al., Ch. 1 & 5]

Sept 14 (Fri)  Methods of Studying the Brain [Breedlove et al., Ch. 5]

Week #2: Molecular & Cellular Neuroscience

Sept 17 (Mon)  Neuronal Transmission [Breedlove et al., Ch 2 & 3]

Sept 19 (Wed)  Neuronal Transmission & Psychopharmacology [Breedlove et al., Ch. 3 & 4]

Sept 21 (Fri)  TEST #1
SECTION #2: Organization of the Nervous System & Brain Functioning

Week #3
Sept 24 (Mon)  Organization of the Nervous System: Subcortical Regions
Sept 26 (Wed)  Organization of the Nervous System: Cortical Regions


Sept 28 (Fri)  Challenges to Localization of Function


Week #4:  Brain Functioning (Cont’d)

Oct 1 (Mon)  Neuropsychology


Oct 3 (Wed)  Decision Making & Morality in the Brain
Oct 5 (Fri)  Decision Making & Morality in the Brain


Oct 10 (Mon)  TEST #2
SECTION #3: Behavioral Neuroscience
Week #5: Physiological Substrates of Learning

Oct 10 (Wed) Long-term Potentiation [Breedlove et al., Chp 13]

BE SURE TO INCLUDE M ZETA MAINTAINING MEMORY HERE

Oct 12 (Fri) FALL BREAK: NO CLASS!

Oct 15 (Mon) Physiological Substrates of Learning


Oct 17 (Wed) Physiological Substrates of Learning (Continued)


Oct 19 (Fri) Sex: As Nature Made Him

Week #6:
Oct 22 (Mon) Sex & the Brain: ARTICLE REVIEW DUE


Oct 24 (Wed) Pain I [Guest Lecture: Dr. Bart Manning, Pfizer Inc.]

Oct 26 (Fri) Pain II

Oct 29 (Mon) Test #3
SECTION #4: COGNITIVE & AFFECTIVE NEUROSCIENCE

Week #8: Cognitive/Affective Neuroscience

Oct 31 (Wed)  Physiological Substrates of Memory
Nov 2 (Fri)  Physiological Substrates of Memory


Week #9: Cognitive/Affective Neuroscience

Nov 5 (Mon)  Physiological Substrates of Memory
Nov 7 (Wed)  Physiological Substrates of Emotion


Nov 9 (Fri)  Neurogenesis I

Week #10: Neurogenesis & Early Life Stress

Nov 14 (Mon)  Neurogenesis II
Nov 16 (Wed)  Neurogenesis III


Nov 18 (Fri)  Effects of Stress During Critical Periods


Week #11: Monday (Nov. 19th) 8:30 to 11 a.m. TEST #4: Non-cumulative FINAL