PSYC 4324: PSYCHOBIOLOGY  
CRN 22338  
COURSE OUTLINE - Fall Semester 2014  
University of Texas at El Paso

Instructor: Eddie Castañeda, Ph.D.  
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Class Time: W, 4:30 – 7:20 pm  
Location: LA 305

Course Description:  
This course is entitled psychobiology, but could also be called behavioral neuroscience, physiological psychology, biopsychology, brain and behavior, or perhaps behavioral biology. These terms describe an area of study concerned with biological explanations of perception, cognition and behavior. The organ responsible for these functions is the brain, and therefore this course deals with how the brain is organized to control and produce behavior. By its nature, physiological psychology is a very interdisciplinary area, and our discussions will include introductory neuroanatomy, neurochemistry, neurophysiology and neuropharmacology. Some background in biology, physiology or microbiology is not imperative but it is helpful. The goal of this course is to introduce you to basic concepts in these disciplines as they relate to behavior. Psychobiology, and the neurosciences in general, are relatively new and very rapidly developing areas. Most of the questions posed do not yet have answers! This makes study in the area particularly exciting, but at the same time difficult. To do well in this course, you should be prepared to commit an above average amount of time.

The course will consist of three major parts. First, basics in cellular/neural structure and function, neuroanatomy, and psychopharmacology will be covered. Next, basic sensory (i.e., visual) and motor systems will be introduced. Last, some advanced topics in psychobiology will be surveyed. If you are successful in this course, you will finish the semester with a fundamental understanding of the principles of behavioral neuroscience, you will be well prepared to study advanced concepts, and you will have a good appreciation for the nature of a research career in behavioral neuroscience.

Required Text:  


Grading, Exams and Rules  
This is a lecture format course. Class attendance, though not recorded, does benefit exam performance. You are responsible for all lecture material. Lecture notes are on Blackboard.

<table>
<thead>
<tr>
<th>Grade Point Distribution:</th>
<th>N</th>
<th>Individ Wt</th>
<th>Total Pcnt Wt</th>
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<tbody>
<tr>
<td>In-Class Quizzes</td>
<td>3</td>
<td>X 2%</td>
<td>= 6%</td>
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<tr>
<td>Out-of-Class Quizzes</td>
<td>9</td>
<td>X 1%</td>
<td>= 9%</td>
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<tr>
<td>Exams</td>
<td>3</td>
<td>X 25%</td>
<td>= 75%</td>
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<tr>
<td>Term Paper</td>
<td>1</td>
<td>X 10%</td>
<td>= 10%</td>
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<tr>
<td>Total</td>
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<td>= 100%</td>
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**In-Class Quizzes.** Three research publications will be assigned for reading randomly during the semester. You will receive a week’s notice for the in-class quiz related to each outside reading (2% each = 6% of final grade).

**Out-of-Class Quizzes.** MyPsychLab, the on-line resource available with the text, provides chapter quizzes (1% each) that will be graded. 9 chapters = 9 quizzes = 9% of final grade. These quizzes must be completed by THE FRIDAY BEFORE relevant exams are administered, unless the instructor specifies otherwise.

**Exams.** Tests will cover material presented in class and additional material from the required readings that will be specifically designated during lecture. Except for the final exam, the first three exams are technically not comprehensive but you will find that material in later tests builds on previous concepts. The exams will be administered only on the dates specified in the lecture outline (see p. 4). The 4th exam will be given on the date set by the university for the final exam. Top 2 grades of 1st 3 exams for 50% of grade will be used, along with the 4th Exam. You must take the 4th exam to pass the course, regardless of what your grade is coming into this last exam.

**Absence During Exams.** There are no make-up exams because you are allowed to miss one of the first three. Look at the exam schedule now and make sure you can attend class during test days, including Exam 4 (see p. 4). If you cannot attend class on test days, you should drop this class now. You must take Exam 4 to pass the course.

**Term Paper.** A maximum 3-page review of one research article about a current topic in behavioral neuroscience will be submitted on April 1 (or earlier by your choice). The term paper is over only one article - an experimental report from a peer-reviewed scientific journal. The specific article you select must have been published on or after November 2014. Web-based manuscripts are acceptable as long as they are from peer-reviewed journals. Some ideas for acceptable topics can be taken from your textbook (start with the Table of Contents).

The following are requirements for the term paper without exception (See p. 5):
1) A photocopy of the abstract from the original manuscript is due on February 11 (or earlier by your choice). Late submission of this requirement will be penalized by the loss of one letter grade per day late on your term paper. This photocopy of the abstract should show the following: 1) author(s), 2) manuscript title, 3) journal title, 4) volume number, 5) year of publication, 6) page numbers, and 7) your name and 8) student i.d. number.

**Note 1:** The purpose of this requirement is to ensure you select an appropriate topic, a peer-reviewed scientific manuscript, and that you have the manuscript in hand.

**Note 2:** If your submission is not acceptable, you must submit a replacement by the next classtime after you receive feedback that your original submission is unacceptable. Only 3 chances are given to submit an appropriate article; after this you earn NO CREDIT for this assignment.

2) Your term paper should summarize the following sections of the article:
   a) **Introduction Section,** summarize the basic issue/problem being investigated, including the experimental hypothesis being tested; if there are multiple hypotheses, select one;
   b) **Methods Section,** summarize at least one experiment reported in the manuscript. From that one experiment clearly describe independent and dependent variables, techniques used and a timeline of events;
   c) **Results Section,** describe the data relevant to your chosen hypothesis as presented in at least one graph or table and what effects were found in that illustration;
   d) **Discussion Section,** present the implications of the results as described by the author(s);
e) **Critical Assessment**, (this is not a section found in an experimental report but an add-on by you). This last section is weighed the heaviest in grading your term paper (25%). You must provide a critical assessment about the paper that incorporates concepts you have learned in the course. Therefore, this section is not a simple reiteration of the report or the authors’ own ideas. Your critique can include weaknesses, innovative strengths of the paper or theoretical and experimental issues that remain unresolved and could be used to guide future directions by this area of research. Be specific about the concept and the page number in the text that relates to your assessment.

3) **Include a photocopy of the complete journal article including references.** Article must include author(s), manuscript title, journal title, volume number, year of publication and page numbers. If missing, 5% will be deducted if even one page is omitted.

**Formatting Requirements**: Typewritten, double-spaced, 1-inch margins all around, Arial font, font size 12, and include titles for the major sections. No handwritten reports are allowed. Late papers will be assessed a one letter grade reduction per day up to 3 days; thereafter, a zero will be assigned as a grade. Late days include any Saturday and Sunday following the due dates. To certify when you submitted it, the paper must be submitted into the hands of the instructor; other forms of submission will be considered appropriately from the time the term paper is first encountered by the instructor. Grading requirements regarding deadlines also apply to the Abstract (1 letter grade per day late).

**Statement on Fair Access to All Students.** If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass. The instructor is not qualified to make assessments on special needs, so to protect all parties CASS provides assessment and gives direction to optimize student needs in these cases.

**Academic Dishonesty**. Please refer to UTEP’s Policy Statement on Academic Dishonesty in the Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Violations will be taken seriously and will be referred to the Dean of Students Office for possible disciplinary action. Students may be suspended or expelled from UTEP for such actions. Academic dishonesty is an assault upon the basic integrity and meaning of a University. Cheating, plagiarism, and collusion in dishonest activities are serious acts which erode the University’s educational and research roles and cheapen the learning experience not only for the perpetrators, but also for the entire community. It is expected that UTEP students will understand and subscribe to the ideal of academic integrity and that they will be willing to bear individual responsibility for their work.

**Grade Appeals.** To request reconsideration of a grade you must take the following steps.

1) Review the assignment/test item and its instructions.
2) Compare your work with the grading criteria, my comments, your textbook, and the instructions.
3) Wait at least 24 hours after the grade is given.
4) Submit an appeal in writing (typed, hard copy, absolutely no e-mail) within one week from the time the assignment or test is returned to the class (if absent on the day the assignment or test is returned, you forfeit your chance to appeal the grade).
5) Provide a clear, well-written argument explaining why your answer is correct or how your work met the instructions and criteria. This should most likely include a reference to a page in your textbook or another reputable source to back up your argument.

**NOTE:** An appeal does not necessarily equate to gaining points. If all directions are followed, this only means I will carefully review your appeal.
### Tentative Date

<table>
<thead>
<tr>
<th>Date</th>
<th>Scheduled Lectures</th>
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<tr>
<td>Jan 21</td>
<td>Introduction and Overview</td>
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<td>Animals in Research</td>
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<td>Mind/Brain Relations: History</td>
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<td>Jan 28, Feb 3</td>
<td>Cells of the Nervous System</td>
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<td>a) Communication Within a Neuron</td>
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<td>b) Communication Between Neurons</td>
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<td>Feb 4</td>
<td><strong>Exam 1</strong></td>
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<td>Required Quizzes BEFORE Exam: Chapters 1, 2, 5</td>
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<td>Feb 4, 11</td>
<td>Structure of the Nervous System</td>
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<tr>
<td>Feb 11</td>
<td><strong>Abstracts for Term Paper Due</strong> (see instructions)</td>
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<td>Feb 18, 25, Mar 4</td>
<td>Psychopharmacology</td>
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<td>Mar 11</td>
<td><strong>Spring Break</strong></td>
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<td>Mar 18</td>
<td><strong>Exam 2</strong></td>
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<td>Required Quizzes BEFORE Exam: Chapters 3, 4</td>
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<tr>
<td>Mar 18</td>
<td>finish Psychopharmacology</td>
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<td>Organization of Sensory Systems – Vision</td>
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<td>Apr 1</td>
<td><strong>Term Paper Due</strong></td>
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<tr>
<td>Apr 1, 8, 15</td>
<td>Organization of Sensory Systems – Vision</td>
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<td>Control of Movement, Parkinson’s Disease</td>
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<td>Apr 22</td>
<td><strong>Exam 3</strong></td>
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<td>Required Quizzes BEFORE Exam: Chapters 6, 8</td>
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<tr>
<td>Apr 22, 29, May 6</td>
<td>Psychobiology of Schizophrenia and Drug Addiction</td>
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**Conclusion.** If you are unwilling to accept any of the above conditions, do not take this course. Your continued enrollment in this course beyond the first two weeks will be taken as evidence that you have read, understood, and unconditionally accepted the above requirements. In addition, university norms for academic behavior are in force (refer to University and Departmental Policy Statements on Academic Dishonesty).
Term Paper Grading Sheet

Student Name: ________________________________

Peer-reviewed Research Manuscript – Zero for any other article (3 Chances): ______ ______ ______

1) Abstract Submission (Due February 11)

   a) Authors:__________________________________________________________ (5%) ______
   b) Manuscript Title:____________________________________________________ (5%) ______
   c) Journal Title:________________________________________________________ (5%) ______
   d) Volume Number:______________________________________________________ (5%) ______
   e) Page Numbers:_______________________________________________________ (5%) ______
   f) Published On or After November 2014:________________________________ (5%) ______
   g) Late Submission: ____ Days Late = ____ Letter Grades Off.______________ (____) ______
   h) Late Resubmissions: ____ Days Late = ____ Letter Grades Off.______________ (____) ______

2) Term Paper (Due April 1)

   a) Format

      1) 3 Pages:__________________________________________________________ (5%) ______
      2) Double-spacing:____________________________________________________ (5%) ______
      3) Arial Font Size 12:__________________________________________________ (5%) ______
      4) 1 Inch Margin All Around:__________________________________________ (5%) ______

   b) Major Sections (Titles)

      1) Introduction:________________________________________________________ (5%) ______
      2) Methods:____________________________________________________________ (5%) ______
      3) Results:_____________________________________________________________ (5%) ______
      4) Discussion:___________________________________________________________ (5%) ______
      5) Critique:_____________________________________________________________ (25%) ______

      1) Assessment: Correlated with Book Material Page #___________

      2) Concept(s) Incorporated from Psychobiology Course Content:

                                      _____________________________

   c) Copy of Article:_______________________________________________________(5%) ______

   d) Late Submission: ____ Days Late = ____ Letter Grades Off.______________ (____) ______

   Term Paper Grade: ______