Psych 410/510: Behavioral Neurology
Course Syllabus for Fall 2014
Wednesday 3:15-6:00
Kildee 108

Instructor: Dr. Robert West
Office: 492 Science Hall I
Email: rwest@iastate.edu
Phone: (515) 294-3950
Course web page: Blackboard Learn

Office Hours: MWF 8:30-9:30 by appointment

Course Description:

In this course we will examine the neurological basis of perception, cognition, and affect within the tradition of behavioral neurology. The course is designed to give students some degree of latitude with regard to pursuing their own interests with the general materials to be covered in class. This flexibility comes both from an ability to select readings of relevance for each week and to explore a topic in greater detail through an in class presentation and book review toward the end of the semester.

Each week students will be responsible for the assigned readings and one additional empirical paper related to the topic under consideration for that week. Examples of journals that could serve as a resource for these articles include (Cerebral Cortex, Brain, Cortex, Neuropsychologia, Brain and Cognition, Brain and Language, Journal of Cognitive Neuroscience, Journal of Neuroscience); there are of course others. Each week I will present a general overview of the topic under consideration for that week in the first part of class. The second part of each class will represent a discussion of the essay style questions that each student generates based upon the articles that s/he chooses to read for the week or the general course material. Part of the “class discussion” grade will come from this opportunity. For the last two weeks of class students will present a 10-20 minute overview and discussion of a topic of their choice (as approved by the instructor) related to some area of behavioral neurology.

Learning Goals for the Psychology Major at ISU:

The undergraduate curriculum in psychology is organized around 5 goals, each with subgoals. Successful completion of Psychology 410/510 should contribute to the following student learning outcomes:

Goal 1: Develop a detailed knowledge of psychology
   1.1 Describe key concepts, principles, and overarching themes in psychology
   1.2 Develop a working knowledge of psychology’s content domains
   1.3 Understand the role of cognitive & learning, developmental, biological, and sociocultural factors in behavior
Goal 2: Develop an understanding of scientific inquiry and demonstrate critical thinking
   2.1 Use scientific reasoning to interpret psychological phenomena
   2.2 Demonstrate psychology information literacy
   2.3 Interpret basic psychological research

Goal 3: Understand the role of ethics and diversity in human behavior
   3.1 Apply ethical standards to evaluate psychological science and practice
   3.3 Appreciate and respect others and their differences

Goal 4: Be able to communicate effectively in the discourse of psychology
   4.1 Demonstrate skill in APA style writing
   4.2 Demonstrate skill in visual and oral presentation of information

Goal 5: Develop skills supporting employment or graduate/professional education
   5.1 Understand how psychological content and skills contribute to career goals
   5.2 Demonstrate project management skills
   5.3 Demonstrate the ability to work in a team

Course Requirements and Grading:

Your grade in the course will be defined by performance on the weekly essay style questions, class attendance, class participation (formal and informal), the in class presentation for Behavioral Neurology in the Media and Entertainment, the in class literature review presentation, a five-page review of a popular neurology book, and the midterm and final examinations. For graduate students there will be an additional assignment that represents either a Current Directions in Psychological Science style review paper or the development of a PEBL program for a neuropsychological test. Late materials will not be accepted and missing a scheduled presentation is equivalent to receiving a zero for that assignment.

Undergraduate credit:
Attendance 15@1 15
Discussion questions 11@3 33
Class discussion 15
BN and media 30
Lit. Review Presentation 50
Book review 50
Mid-term 50
Final examination 50 296

Graduate credit:
Current Directions or PEBL 50 343
A: 94-100  C: 73-76
A-: 90-93    C-: 70-72
B+: 87-89    D+: 67-69
B: 83-86     D: 63-66
B-: 80-82    D-: 60-62
C+: 77-79    F: < 60

Weekly Discussion Questions:

Each week students will be responsible for posting two discussion questions to Blackboard. These should come from the assigned or independent readings, and could focus on unresolved questions that exist in the literature, implications of insights gained from the readings, inconsistencies that exist in the literature. Questions should be posted on Blackboard by 5 pm on Tuesday before the relevant class on Wednesday.

Behavioral Neurology in the Media and Entertainment:

For this assignment students will work in groups of 2. The objective of the assignment is to identify an example from the media or entertainment that describes a disorder related to Behavioral Neurology and to provide a critique of the way the condition is portrayed (i.e., how accurate are the symptoms that are described, the treatments that are given, the prognosis of the patient). The presentation should last 10-20 minutes and include a sample of the media segment that you are critiquing. Your critique of the media should include a Powerpoint presentation that explores issues relevant to the assignment.

Titles for Book Review and Structure of the Assignment:

The critical book review represents a 5 page double spaced typed summary of one of the books listed below or an alternative as approved by the instructor. In this paper the student will provide an overview of the major themes and ideas presented in one of the books as well as some personal reflection and analysis of the cases or ideas that are presented. In writing the review students might want to consider the following questions: 1) What was the central message of the book, 2) How do the ideas discussed in the book converge or diverge with what you have learned about behavioral neurology over the course of the semester, 3) How has reading the book changed your view of the specific disorders that were under consideration, 4) What novel theory has the book introduced to the scientific community, 5) What are some of the limitations of the arguments made in the book. The paper is due on December 10 at 3:15 pm.


Others as approved by instructor.

**Current Directions Review or PEBL Project:**

Graduate students will have the additional course requirement of writing a *Current Directions in Psychological Science* style review paper or developing a program to run a neuropsychological test using the PEBL software. A review paper should follow the published format and word limits of a CDPS paper; PEBL projects should produce a runnable version of a task along with a 1-2 users manual that describes the background of the task and the mechanics of the program. Students may work on these projects individually or in teams of 2. The assignment is due December 3 at 3:15.

**Class Policies:**

Academic Dishonesty: Procedures for dealing with academic dishonesty (cheating, plagiarism, etc.) will follow university guidelines. See the ISU student handbook for details.

Students with disabilities: If you have a disability and require accommodations, please contact the instructor early in the semester so that your learning needs may be appropriately met. You will need to provide documentation of your disability to the Student Disability Resources (SDR) office, located on the main floor of the Student Services Building, Room 1076, 515-294-7220.

**Topics and Schedule:**

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<th>August</th>
<th>Course overview and methods in neural science</th>
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<tbody>
<tr>
<td>27</td>
<td>Farah &amp; Feinberg Chapters 1-2, 7</td>
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<tr>
<td>September</td>
<td>Agnosia</td>
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<tr>
<td>3</td>
<td>Farah &amp; Feinberg Chapters 8-12</td>
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<td>Farah &amp; Feinberg Chapters 14-15</td>
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17 Aphasia
Farah & Feinberg Chapters 16-18, 37

24 Emotion

October 1 Amnesia
Farah & Feinberg Chapters 24-27

8 Behavioral Neurology in the media and entertainment
(Mid-term Exam – Due October 15 at 3:15)

15 Executive function
Farah & Feinberg Chapters 22-23

22 Social cognition
Bechara, A., Damasio, H., Tranel, D., & Anderson, S. W. (1998). Dissociation of working memory from decision making with the
human prefrontal cortex. The *Journal of Neuroscience, 18*, 428-337.

29  Callosal disconnection and plasticity  
Farah & Feinberg Chapters 6, 30  
Baynes, K., Wessinger, C. M., Fendrich, R., & Gazzaniga, M. S.  

November 5  Dementia  
Farah & Feinberg Chapters 31-32  

12  Neurodegeneration (Parkinson’s and Huntington’s disease)  
Farah & Feinberg Chapters 33  

19  Traumatic Brain Injury  

26  (Thanksgiving)

December 3  Student presentations I

December 10  Student presentations II