Psyc504A
HUMAN BRAIN AND BEHAVIOR RELATIONSHIPS
Fall 2010

I. Class Info

Date/Time: Wednesdays 9 - 11:50pm
Location: Psychology 317B
Website: http://d2l.arizona.edu
Instructor: Marisa Menchola, Ph.D.
Office: Psychology 214
Email: menchola@email.arizona.edu
Phone: 621-4003
Office hours: Wednesdays 1 - 3pm and by appointment

II. Description and Objectives

This course is an introduction to basic topics in human neuropsychology for graduate students with interests in clinical neuropsychology and cognitive neuroscience. There are no prerequisites for the course; however knowledge of basic neuroanatomy, neurophysiology, and cognitive psychology is very helpful. Students with no background in biopsychology or neuroscience are strongly encouraged to review introductory material. A good resource is: Kolb, B. & Whishaw, I.Q. (2008). Fundamentals of Human Neuropsychology (6th ed.). New York: Worth.

The course will begin with an overview of the history and methods of human neuropsychology. We will then review current knowledge and empirical research regarding the basic cognitive functions including attention, language, memory, visuospatial functioning, executive functions and memory processes, with an emphasis on their neural bases, assessment, and disorders. The last part of the class will focus on the neuropsychological effects of neurological, psychiatric, and other medical illnesses.

III. Requirements and Grading

1. Presentation of a neuropsychological instrument or neuropsychological profile = 25%
   You are required to give one 20-minute long presentation on your choice of topic, either a) a neuropsychological instrument, or b) a neuropsychological profile.
2. Discussion papers = 20%
   There will be 5 discussion papers, and the 4 with the highest scores will count towards your final grade. Discussion topics will be provided in class, and papers will be due at noon on the Monday before the next class. You will turn in your papers by uploading them on D2L; please note that no late papers will be graded. Papers must be no shorter than one but no longer than two pages long.
3. In-class quizzes = 25%
   There will be 6 in-class quizzes, and the 5 with the highest scores will count towards your final grade. Quizzes will consist of multiple-choice and short answer questions.
4. Take-home final exam 25%
5. Attendance and participation in class discussions (5%)
IV. Class Schedule

The following is a tentative schedule of class topics and assigned readings, subject to change:

Part I: Introduction

Aug. 25 Introduction to the class. Historical overview of the field of neuropsychology.

Sep. 1 Neuropsychological concepts and methodological issues.

Sep. 8 Cortical organization and cerebral asymmetry.

Part II: Neuropsychological Functions

Sep. 15 Voluntary action. Vision and visual processing.
  Quiz #1: History, Methods, Cortical organization.

Sep. 22 Attention and visuospatial abilities.

Sep. 28  **Language**
→ Quiz #2: Voluntary action; Visual processing; Attention and visuospatial abilities

Oct. 6  **Memory**

Oct. 13  **Frontal and “executive” functions.**
→ Quiz #3: Language and memory.

Oct. 20  **Attention, Consciousness, and the self.**

Oct. 27 Emotional processes.

Part III: Neuropsychological sequelae of neurological and psychiatric disorders

Nov. 3 Brain injury. Seizure disorders. Cerebrovascular disease.
→ Quiz #4: Executive functions, Consciousness & Self, Emotions.

Nov. 10 Alzheimer’s disease and other dementias vs. cognitive changes in healthy aging.

Nov. 17 Other neurological and medical disorders: Parkinson’s disease, brain tumors, multiple sclerosis, diabetes.
→ Quiz #5: Brain injury, seizure disorders, CVD, dementia, aging.

Nov. 24 NO CLASS

Dec. 1 Psychiatric illness: Mood and substance-related disorders.
* Rourke, S.B., & Grant, I. (2009). The neurobehavioral correlates of alcoholism. (Grant & Adams Chapter 18, pp. 398-454)

Dec. 8 Plasticity, recovery and rehabilitation.
   → Quiz #6: Other neurological and medical disorders; Psychiatric illness.

Dec. 15 Final Exam posted on D2L @ 9am.

Dec. 17 Final Exam due @ 9am.