Syllabus

Neuropsychology

PSYC 545

Spring 2019, Mon-Wed, 10:00-11:50 AM

Location:	SGM 226
Course Instructor/ Director:	Antoine Bechara HNB B26
Office Hours:	By appointment
Contact Info:	bechara@usc.edu
IT Help:	NA
Hours of Service:	NA
Contact Info:	NA

Course Description: This is a graduate level course that covers brain mechanisms underlying behavior and cognitive functioning: brain damage, loss of function, and clinical assessment. It consists of three major sections: Overview of Neuroanatomy, Neurological Illnesses, and Neuropsychological Syndromes associated with damage in different lobes of the brain. These sections are delivered in the form of lectures, and clinical cases on patients with neurological lesions or diseases. The course material is interrelated throughout these forms of teaching, giving students multiple ways of learning the material.

Learning Objectives: The objectives of the course are: (1) to introduce basic concepts about the organization, structure, and function of the human central nervous system and understand the biological basis of behavior; (2) to enable students to apply these fundamental principles toward understanding nervous system function and dysfunction and toward clinical problem-solving in relation to neurological and neuropsychological disorders; (3) to provide the necessary background for correlation with related courses, for advanced study of the nervous system, and for monitoring new developments in the basic and clinical sciences.

Prerequisite(s):	No pre-requisites for graduate level students. Undergraduates in senior year are allowed to enroll (no specific prerequisites), but instructor permission is required.
Co-Requisite (s):	None
Concurrent Enrollment:	None

Recommended Preparation: None

Course Notes: Course Syllabus, Lecture Materials, and Clinical Cases will be posted on Blackboard as the course progresses.

Attendance and Student Responsibilities: Students are responsible for all materials covered in class. Students are also responsible for all announcements or schedule changes that are made in class. Attendance at examination is mandatory, except for illness or urgent matters. For urgent matters that are non-medical in nature, students must receive permission in advance from the Instructor to be excused from attending an examination at the scheduled time.

Technological Proficiency and Hardware/Software Required: NA

Recommended Textbook: The textbook recommended for this course is Walsh's NEUROPSYCHOLOGY, A Clinical Approach, Fifth Edition, David Darby and Kevin Walsh, Elsevier, 2005.

Course Syllabus, Lecture Materials, and Clinical Cases will be posted on Blackboard as the course progresses.

Other textbook recommended for readings: Bryan Kolb and Ian Q. Wishaw: Fundamentals of Human Neuropsychology, 6th Edition,Worth Publishers, 2009.

Description and Assessment of Assignments:
The course will include (1) two mid-term tests based on the information presented in lectures. All materials on these tests will be from the class slides and posted on Blackboard; (2) there is one presentation by each student during the last week of classes. Each presentation will consist of a clinical case provided during the course and posted on Blackboard; (3) there is one term paper that discusses the neuropsychological methods used to evaluate brain dysfunction; and (4) one final exam.

1. Mid-term tests: These will have short answers format. All test/exam questions will be based on materials presented and discussed in class and not on any outside materials.

2. Student presentations: Each student will make a clinical case presentation that involves a neuropsychological evaluation. All clinical cases will be provided and posted on Blackboard. The solutions to these clinical cases are also provided. The student's responsibility is to teach the cases to the rest of the class, and to link clinical data to underlying brain mechanisms learned during the course.

3. Term paper: The course mostly emphasizes brain mechanisms of behavior, and it does not detail neuropsychological tests and methods used to evaluate brain dysfunctions. This term paper is an opportunity for students to learn something about the various neuropsychological batteries used to evaluate behavioral and cognitive impairments. The term paper can address the neuropsychological tests to evaluate any of the following brain regions (the student can choose any one of the regions below:

a. Neuropsychological tests used to evaluate executive functions or frontal lobe functions.
b. Neuropsychological tests used to evaluate parietal lobes functions.
c. Neuropsychological tests used to evaluate temporal lobe functions.
d. Neuropsychological tests used to evaluate occipital lobe functions.
e. Neuropsychological tests used to evaluate sub-cortical functions.

Each paper should be 13-15 pages, but this may include figures/diagrams of tests discussed or results showing impairments on these tests. All papers should be double-spaced, typed in Arial 11 point font, with 1" margins. Papers are due during the last week of classes.

4. A final exam: This will have short answers format. Questions will be based on materials presented and discussed in class and not on any outside materials.

Grading Breakdown: There will be 3 midterm exams covering lectures and practical/ clinical cases, and a final examination. Final grades will be calculated as follows:

Midterm 1 (multiple choice plus short answers)	25%
Midterm 2 (multiple choice plus short answers)	25%
Term paper (due last week of classes)	15%
Clinical case presentation (during last week of classes)	15%
Final Exam (multiple choice plus short answers)	20%
Final Grade	100%

Assignment Submission Policy: NA

Additional Policies: NA

Course Schedule: A Weekly Breakdown

Overview of Neuroanatomy

	Topic/Class Activity	**Readings and Homework**	**Deliverable/ Due Dates**
Week 1 Dates: Jan 7-9	Course Introduction. History of Neuropsychology. Methods in Neuropsychology	Read Chapter 1 and posted lecture slides. Supplement: chapters 1,3,8,9,10 of Kolb and Wishaw.	Participate in class questions and discussions.
Week 2 Dates: Jan 14-16	Basic brain anatomy: -Coverings, CSF. -Blood supply. -Gross morphology and primary cortices.	Read Chapter 2 and posted lecture slides. Supplement: chapters 1,3,8,9,10 of Kolb and Wishaw.	Participate in class questions and discussions.
Week 3 Dates: **Jan 21** Jan 23	**MLK Holiday** -Cerebral cortex, diencephalon, brainstem.	**No Classes** Read Chapter 2 and posted lecture slides. Supplement: chapters 1,3,8,9,10 of Kolb and Wishaw.	**No Classes** Participate in class questions and discussions.

Neurological Illnesses

Week 4 Dates: Jan 28-30	Elements of neurology: -Neurological exam -Common neurological disorders: Trauma	Read Chapter 3 and posted lecture slides. Supplement: chapters 8,9,26, 27 of Kolb and Wishaw.	Participate in class questions and discussions

Week 5 Dates: Feb 4-6	Tumors, strokes, degenerative disorders, epilepsy.	Read Chapter 3 and posted lecture slides. Supplement: chapters 8,9,26, 27 of Kolb and Wishaw.	Participate in class questions and discussions
Neuropsychological Syndromes			
Week 6 Dates: Feb 11-13	Higher cerebral functions 1: Perception/ visuospatial/ agnosia, attention/ neglect, memory/ amnesia.	Read Chapter 3 and posted lecture slides. Supplement: chapters 8,9,26, 27 of Kolb and Wishaw.	Participate in class questions and discussions
Week 7 Dates: **Feb 18** **Feb 20**	**President's Day Holiday** **Term Test 1**	**No Classes**	**No Classes**

Week 8 Dates: Feb 25-27	Higher cerebral functions 2: Language/aphasia, apraxia.	Read Chapter 3 and posted lecture slides. Supplement: chapters 8,9,26, 27 of Kolb and Wishaw.	Participate in class questions and discussions.

Week 9 Dates: March 4-6	Frontal/executive: The Frontal Lobes. -Anatomy, function, syndrome, lesions, personality.	Read Chapter 4 and posted lecture slides. Supplement: chapters 16, 20 of Kolb and Wishaw.	Participate in class questions and discussions.
	Spring Break	**March 11-17**	**No Classes**
Week 10 Dates: March 18-20	Temporal Lobes: -Anatomy, function, special sensory and perception, complex partial seizures, lesions.	Read Chapter 5 and posted lecture slides. Supplement: chapter 18, 20 of Kolb and Wishaw.	Participate in class questions and discussions.
Week 11 Dates: March 25 **March 27**	The parietal lobes: -Sensory and perceptual disturbances, spatial orientation disorders. -Apraxia, alexia, acalculia, spatial neglect, anosognosia. **Term Test 2**	Read Chapter 6 and 7 and posted lecture slides. Supplement: chapter 13, 14, 19, 22 of Kolb and Wishaw.	Participate in class questions and discussions.
Week 12 Dates: April 1-3	The occipital lobes: -Cerebral blindness, denial of blindness, visual perception, agnosia, alexia, agraphia.	Read Chapter 7 and posted lecture slides. Supplement: chapter 13, 14, 19, 22 of Kolb and Wishaw.	Participate in class questions and discussions.

Week 13 Dates: April 8-10	Hemispheric asymmetry: -Cerebral dominance, disconnection syndromes, split brain, agenesis of corpus callosum.	Read Chapter 8 and posted lecture slides. Supplement: chapter 11, 12, 17 of Kolb and Wishaw.	Participate in class questions and discussions.
Week 14 Dates: April 15-17	The interbrain: -Functional Disorders -Amnesic syndromes and dementias.	Read Chapter 9 and posted lecture slides. Supplement: chapter 27 of Kolb and Wishaw.	Participate in class questions and discussions.
Week 15 Dates: April 22-24	**-Neuropsychological Assessment: Student presentations of real clinical cases.** **Term Paper Due**	Read Chapter 10 and 11 and posted lecture slides.	Participate in class questions and discussions.
FINAL Date			Date: For the date and time of the final for this class, consult the USC *Schedule of Classes* at www.usc.edu/soc.

Statement on Academic Conduct and Support Systems

Academic Conduct
Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards*https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct/.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity*

http://equity.usc.edu/ or to the *Department of Public Safety* http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.htmlprovides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information http://emergency.usc.edu/*will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.