CLP 4420 (Sec 5159): INTRODUCTION TO NEUROPSYCHOLOGY

College of Public Health & Health Professions

Spring 2014
3 Credit Hours

Monday 5:10-8:10
HPNP G312

Instructor Information

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Course Overview

This course is designed to provide an introduction to the science and practice of clinical neuropsychology, including the anatomic, functional, and cognitive substrates underlying human behavior and neuropsychological disorders.

Course Objectives and/or Goals

Upon successful completion of the course, students will have acquired an understanding of the terminology and concepts essential to the field of clinical neuropsychology, including:

- the role of neuropsychology in the interdisciplinary study and treatment of clinical disorders of higher cognitive function
- the historical origins and future directions of neuropsychology
- key methods and major assumptions in neuropsychology research and clinical practice
- functionally relevant neuroanatomy and neurophysiology
- primary cognitive domains and related neuropsychological disorders, including their assessment and differential diagnosis
- lifespan issues in neuropsychology, including pediatric and geriatric disorders, and the role of neuroplasticity in the brain's response to injury and interventions
- professional considerations, including ethical guidelines, training requirements, and career options.

Course Materials

Required textbook: Zillmer, E.A., Spiers, M.V., & Culbertson, W.C. (2008). *Principles of Neuropsychology: 2nd Edition*, Thomson Wadsworth Publishers.
Online Materials: Required readings not found in the textbook will be posted via the University's E-learning system/Sakai <http://lss.at.ufl.edu>
Supplemental and Optional Readings/Resources: Additional articles, videos, and tutorials will also be posted on Sakai.

- ***NOTE: All readings posted online are for educational purposes only and should not be duplicated or redistributed***.

What to Expect

The human brain is arguably the most complex organ of the body; as a result, understanding its function – and dysfunction – can be both fun and challenging. Our goal is to provide you with the necessary tools and resources to succeed in this course. Therefore, ***you can expect us to:***

- Be passionate about the material and do our best to facilitate interest and learning
- Post PowerPoint files of each lecture on the course website (every effort will be made to post these by the morning of each class)
- Integrate videos, case studies, and guest presentations into class lectures wherever feasible
- Provide supplemental readings, tutorials and videos to enhance learning
- Be available during weekly office-hours in person
- Provide opportunities to review material before each exam

In return, ***we expect you to:***

Attend class.

- Participate: In addition to simply attending class, we hope and expect that you will participate in discussions and lectures.
- Read: Again, this course will cover a large amount of material, and readings have been carefully selected to help you learn and understand the topics discussed in lecture.
- Be respectful and professional with classmates, instructors, and guest speakers. Professional behavior includes arriving on time for class and turning off all cellphones and PED's. In class, laptops should be used for viewing slides and taking notes, NOT for surfing the web or other non-academic activities.

Course Requirements/Evaluation/Grading

Final grades will be based on attendance/participation, one paper assignment, and three exams:

Exam 1 (Feb. 3): 25%
Exam 2 (March 17): 25%
Paper (April 7) 25%
Exam 3 (April 21): 25%

We do not plan to include any in-class quizzes. However, we reserve the right to perform unannounced quizzes if attendance and/or reading become problematic.

Exams and participation will each be assigned a number of points in proportion to their contribution to the final grade. Points will be summed and letter grades will be assigned according to the percentage of total points possible. All grades will be rounded to the nearest integer. The approximate final percentage cut-offs will be as follows:

Percentage or points earned in class	**93%-100%**	**90%-92%**	**87%-89%**	**83%-86%**	**80%-82%**	**77%-79%**	**73%-76%**	**70%-72%**	**67%-69%**	**63%-66%**	**60%-62%**	**Below 60%**
Letter Grade equivalent	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

Each exam will cover a fair bit of material and will be challenging. The best way to do well is to stay actively involved in the class and in the course material (e.g., take notes, quiz yourself, form study groups, read ahead).

Paper Assignment: Each student will be expected to complete one paper assignment, which will account for 25% of the final course grade, due April 7 at 5pm. The paper will consist of a critique of a research article in neuropsychology. Students will choose one article to critique from a list of articles provided for this purpose. Specific format for subsections of the paper, as well as a scoring rubric, are forthcoming. Papers should be 3-5 typed, double-spaced pages in 11-12 point font with 1" margins. Font must be Times New Roman. Students will submit the paper electronically in Sakai by the due date/time.

Extra credit: Extra credit assignments may be added during the semester as appropriate.

Policy Related to Make-up Exams or Other Work

Students are expected to attend and be prepared to participate in all class sessions and exams. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual bases. Absence from an exam for appropriate professional obligations (e.g., graduate, professional, or medical school interviews) are permissible, but must be preapproved by the course instructor. If a make-up exam is required duet o professional obligations or health reasons, documentation (e.g., doctor's note) will be expected. Approved make-up exams must take place within 7 days of the originally scheduled exam date at a time mutually agreed upon by the instructor and student.

Course Outline

The following is a list of topics and readings for the course. Students will be promptly notified of any necessary changes to this outline.

Classes 1-3: Introduction, Methods and Anatomy		
Jan 6: INTRODUCTION AND HISTORY Class 1 Welcome, Course Syllabus	*Lecture Topics:* Neuropsychology and Clinical Neuroscience History of Neuropsychology	*Required Readings:* Zillmer, Spiers & Culbertson: • Chapter 1: A History of Neuropsychology
Jan 13: FUNCTIONAL NEUROANATOMY AND BEHAVIOR Class 2	*Lecture Topic:* Clinically-relevant functional neuroanatomy: General principles and functional systems	*Required Readings:* Zillmer, Spiers & Culbertson: • Chapter 4: Cells of Thought • Chapter 5: Functional Neuroanatomy • Chapter 6: Cerebral Specialization (pp. 155-167)
Jan 20: No Class (Martin Luther King Holiday)		
Jan 27: RESEARCH AND CLINICAL METHODS Class 3	*Lecture Topics:* Experimental methods Clinical methods of assessment	*Required Readings:* Zillmer, Spiers & Culbertson: • Chapter 2: Methods of Investigating the Brain • Chapter 3: Neuropsychological Assessment and Diagnosis
Feb 3: EXAM 1 (Classes 1-3)		
Classes 4-8: Cognitive Domains and Disorders		
Feb 10: LANGUAGE AND APHASIA Class 4	*Lecture Topics:* Overview of Language Acquired and Developmental Language Disorders	*Required Readings:* Online/Sakai: • Kolb & Whishaw: Chapter 19: The Origins of Language *Optional Reading:* • Sacks, O. (2005). Recalled to life: When patients suffer a loss of language, must they also lose their sense of self? The New Yorker, October 31, 46-53.
Feb 17: ATTENTION AND PERCEPTION Class 5	*Lecture Topics:* Visuospatial Abilities, Attention, Neglect, Agnosia *Key Topics/Disorders:* Attentional dysfunction	*Required Readings:* Zillmer, Spiers, & Culbertson: • Chapter 9: pp. 240-246 On course website: Selections from Kolb & Whishaw: • Chapter 13: The Occipital Lobes

	Sensory perception Visuospatial processing Visual Agnosia (object, face agnosia) Hemispatial Neglect Topographical Disorientation	○ pp. 323-325 ("Visual Functions Beyond the Occipital Lobes") ○ pp. 330-340 (beginning with "Disorders of Cortical Function") • Chapter 14: The Parietal Lobes ○ pp. 345-364 • Chapter 15: The Temporal Lobes *Optional Readings:* • Bisiach, E. & Luzzatti, C. (1978). Unilateral neglect of representational space, Cortex, 14, 129–133. • Farah, M. J. & Feinberg, T. E. (2000). Visual object agnosia. In M. J. Farah & T. E. Feinberg (Eds.), Patient-based approaches to cognitive neuroscience (pp. 79-84). Cambridge, MA: MIT Press.
Feb 24: MEMORY AND AMNESIA Class 6	*Lecture Topic:* Overview of memory, Amnesia Episodic and semantic memory disorders	*Required Readings:* Online: • Kolb & Whishaw: Chapter 18: Memory • Kuhn & Bauer, 2012 *Optional Reading:* • Sacks, O. (2007). The abyss: Music and amnesia. *The New Yorker*, *September 24*, 100-111. • Farah, M.J. & Grossman, M. (2000). Semantic memory impairments. In M. J. Farah & T. E. Feinberg (Eds.), *Patient-based approaches to cognitive neuroscience* (pp. 301-305). Cambridge, MA: The MIT Press.
March 3: No Class (Spring Break)		

March 10: FRONTAL LOBE AND EXECUTIVE FUNCTIONS Class 7	*Lecture Topics:* Functional Anatomy of Frontal Lobes Executive function and dysfunction Motor Planning and Intention Personality and Mood Regulation Working Memory	*Required Readings:* Zillmer, Spiers & Culbertson: • Chapter 9: pp. 246-259 Sakai: Kolb & Whishaw: • Chapter 16: The Frontal Lobes • Chapter 26: Neurological Disorders – TBI section (pp. 702-706) *Optional Reading:* • Damasio, H., Grabowski, T., Frank, R., Galaburda, A. M., & Damasio, A. R. (1994). The return of Phineas Gage: Clues about the brain from the skull of a famous patient. *Science, 264*, 1102-1105.
March 17: Exam 2 (Classes 4-7)		
March 24: TRAUMATIC BRAIN INJURY Class 8	*Lecture Topics:* Overview of traumatic brain injury Functional outcome in head injury Assessment and management of head injury and concussion Rehabilitation	*Required Readings:* Zillmer, Spiers & Culbertson: • Chapter 13: Traumatic Head Injury and Rehabilitation (pp. 369-389) *Optional Reading*: T.B.D
Classes 9-11: Clinical lifespan and professional issues		
March 31: PEDIATRIC NEUROPSYCHOLOGY Class 9 Lecture Topics:	*Lecture Topics:* Epilepsy Developmental/Autism Spectrum Disorders Pediatric Neuropsychology Pediatric Neuropsychological Disorders: Pre- and perinatal brain damage Genetic/congenital disorders Learning disabilities Pervasive Developmental Disorders Attention Deficit Hyperactivity	*Required Readings*: Zillmer, Spiers & Culbertson: • Chapter 10: Developmental Disorders of Childhood • Chapter 11: Learning and Neuropsychiatric Disorders of Childhood *Optional Reading*: • Barkley, R. A. (1998). Attention-Deficit Hyperactivity Disorder. Scientific American, September issue, 66-71.

	Disorder	
April 7: AGING AND DEMENTIA Class 10 **PAPERS DUE BY 5pm**	*Lecture Topics:* Normal Aging Pathological Aging and Dementia *Key disorders:* Mild Cognitive Impairment (MCI) Degenerative dementia (cortical and subcortical) Vascular dementia/vascular disease/white matter disease	*Required Readings*: Zillmer, Spiers, & Culbertson: • Chapter 12: Cerebrovascular Disorders (pp. 339-347; 351-357) • Chapter 14: Normal Aging and Dementia: Alzheimer's Disease • Chapter 15: Subcortical Dementias *Optional Readings*: • Reuter-Lorenz, P.A. (2002). New visions of the aging mind and brain. Trends in Cognitive Sciences, 6(9), 394-400. • Park, D. C. and P. Reuter-Lorenz (2009). "The adaptive brain: aging and neurocognitive scaffolding." Ann Rev Psychol 60: 173-96 • DeKosky, S.T., & Marek, K. (2003). Looking backward to move forward: early detection of neurodegenerative disorders. Science, 302(5646), 830-834.
April 14: PROFESSIONAL ISSUES AND APPLICATIONS Class 11	*Lecture Topics:* Ethical guidelines and considerations Multicultural issues in Neuropsychology Forensic Neuropsychology Training in Neuropsychology Careers in Neuropsychology	*Required Readings*: Online/Sakai: • Craig, P. (2007). Clinical Neuropsychology: Brain-Behavior Relationships. In R. J. Sternberg (Ed.), Career Paths in Psychology: Where Your Degree Can Take You (pp. 161-178). Washington, DC: American Psychological Association. • Ethical guidelines (TBA)
April 21: Exam 3 (67% from Class 8-11; 33% cumulative)		

Statement of University's Honesty Policy (cheating and use of copyrighted materials)
Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior. Students are expected to act in accordance with the University of Florida policy on academic integrity (see Student Conduct Code, the Graduate Student Handbook or this web site for more details: http://www.dso.ufl.edu/judicial/academic.php.

"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. "

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Statement Related to Accommodations for Students with Disabilities
If you require classroom accommodation because of a disability, you must first register with the Dean of Students Office (http://www.dso.ufl.edu/). The Dean of Students Office will provide documentation to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health
Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the University of Florida Counseling Center, 352-392-1575, or Student Mental Health Services, 352-392-1171. Visit their web sites for more information: http://www.counsel.ufl.edu/.

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services, including primary care, women's health care, immunizations, mental health care, and pharmacy services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the website at: http://shcc.ufl.edu/satellite/shands.shtml

Crisis intervention is always available 24/7 from:
Alachua County Crisis Center: (352) 264-6789.

BUT – Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

How to access course materials
You can access course materials (including the syllabus, required readings other than those from the textbook and optional readings) on the University's E-learning system (Sakai) at the following URL: http://lss.at.ufl.edu/. We will make every effort to post lecture notes on the mornings of class, and to

post required readings at the beginning of the week in which they are assigned. Please email us if you have any difficulty accessing these materials.