

CLP 6307 HUMAN HIGHER CORTICAL FUNCTION Syllabus

Spring Semester 2018
Tuesdays, 3:00 – 6:00 PM
HPNP Building
Room G-316

Instructor/Organizer

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Appointments: Schedule via email

Co-Instructors:

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Class Location: All classes will be held in the HPNP building, Room G-316. This is on ground floor of HPNP building.

Assigned Text: Clinical Neuropsychology, 5th edition (2012), K.M. Heilman & E. Valenstein (Eds), Oxford University Press, New York. Note: In the syllabus, this text is referred to as *H&V*. Other readings

General Overview and Purpose

This course will introduce the student to human brain-behavior relationships and other topics relevant to the biological basis of complex behavior. The course consists of topical lectures given by faculty of the University of Florida Center for Neuropsychological Studies, the Center for Movement Disorders and Neurorestoration, the Brain Research and Rehabilitation Center, and the McKnight Brain Institute. This course is designed to provide a survey of normal and abnormal brain functioning from a systems perspective. Classical syndromes in neuropsychology and behavioral neurology will be presented. Cognitive, sensory, motor, and emotional signs, symptoms, and syndromes that arise from various forms of central nervous system disease will be examined and the functional anatomy underlying complex behavior will be described.

Course Objectives

Successful completion of the course should allow students to (a) learn about basic structural and functional systems of the brain; (b) recognize and identify the functional brain systems involved in complex behaviors such as language, memory, spatial ability, and attention; (c) develop the ability to recognize the major signs and symptoms of CNS impairment; and (d) develop an appreciation of the complexity of higher brain functions.

Course Materials

The syllabus and assigned readings for this course are available via UF's Canvas platform. Readings will consist of chapters from the assigned text, Clinical Neuropsychology (5th edition, 2012) and from other assigned articles/chapters. These *other articles/chapters* will be available electronically in pdf form and located on Canvas. Make sure that you have a working email address. If your email address changes or you miss the first day of class, it will be your responsibility to contact Dr. Bowers with your desired email address in order to receive notification about changes in course readings.

The content of the course includes assigned readings and lectures by UF Faculty. *If available*, power points will be provided in advance or after the lecture given by a faculty presenter. However, depending on nature of presentation, some faculty may prefer not to share their personal work products and others do not use

powerpoint for teaching purposes. You are responsible for learning the course materials, regardless of whether a handout is available from an individual lecturer.

Course Requirements, Evaluation, and Grading

Enrolled students are expected to attend weekly classes, complete weekly assigned readings **prior to class** and participate in integrative discussions that conclude each class. The exception is class 1. Students will be pre-assigned to lead or co-lead one integrative discussion which will be facilitated by Dr. Bowers and the course co-instructors, Drs. Belser and Fernando. There will be a take home midterm exam (due Monday March 12, 2018) and a final exam (TBD). The midterm will assess knowledge of material discussed through the February 27th class meeting, and the final exam will be comprehensive. At the beginning of each class will be a weekly quiz that is based on assigned readings for that class.

Weekly Quizzes based on readings. A brief 5-10 question quiz will occur at the beginning of each class. Questions are short-answer or multiple choice/true-false and based solely on assigned readings. There will be total of 13 quizzes starting with Class 3 (i.e., Classes 3-14), with students having option of dropping two quizzes of their choice for any reason (i.e., inability to attend class due to traveling, illness, low grade). The 10 quizzes you select will account for 20% of your grade. (i.e., each quiz = 2%).

Mid-Term and Final Exams: The midterm and final exams will be a combination of multiple choice, odd-man out, short essays and other types of short-answer formats. The content of these exams is based on lectures, readings, and class discussion.

Guidelines for Integrative Discussions - Students will be assigned in groups of 2-3 to lead one of the integrative discussion sessions during the final ½ hour of each class. The group will be responsible for identifying 3 or more key points from the readings and presentations to discuss.

Extra Credit Opportunities (up to 3% of Final Grade) There are a variety of excellent multidisciplinary opportunities that students may avail themselves in order to enrich their exposure and provide contemporary context to the topics covered in this course. You are welcome to attend these meeting. You may also receive up to 3% extra credit if you attend at least 3 different meetings from any of the list below and write up a brief reaction paper for each meeting you attend (i.e., 3 reaction papers). The reaction paper must be typed and include in the header the date, meeting, presenter, and topic. The body of the paper will be your intellectual reaction to the content of the presentation. It should range in length from 1-2 pages max, single spaced. **All reaction papers are due on the Tuesday that most immediately follows the particular meeting you attend (i.e., if you attend an ANST meeting on a Friday, then reaction paper is due the following Tuesday by 3:00 PM).** To receive maximum extra credit, attend up to 2 different meetings below and write up reaction paper as described in this paragraph.

- Neurology Grand Rounds (Tuesdays, 11:30 AM – 1:00 pm) This is a weekly meeting held in the Deweese Auditorium of the MBI. Occasionally, these meetings involve a direct interview and presentation of a live patient, and thus attendees dress as if they were seeing patients themselves
- Movement Disorders Center Weekly Rounds (Tuesdays 8:00 AM – 9:00 AM): This weekly meeting typically alternates between clinical and research presentations. During clinical presentations, videos of interesting and unique cases are presented. Research meetings vary. It is held in the Deweese Auditorium of the MBI or the 4th floor conference room of the CMDNR (located at the Orthopedics Institute).
- Epilepsy Case Conferences (Tuesdays 8:00-9:30). During these meetings, potential candidates for seizure surgery are discussed with input from findings of EEG-Video monitoring, Wada, neuropsychology, and neuroimaging.
- Other. We will keep you informed about other opportunities.

Summary of Grading

In summary, the final grade will be determined according to the students' scores on the weekly quizzes (20%), Midterm exam (worth 30% of the total grade), the Final exam (worth 40% of the final grade) and Participation (worth 10% of the final grade) and expressing that average as the percentage of the total possible points. Extra credit, up to 3%, may also be obtained.

Weekly Quizzes (based on readings)	20%
Midterm Exam	30%
Final Exam	40%
Integrative Discussion	10%
<i>Extra Credit</i>	<i>3% max</i>

Scores will be rounded to the nearest percent (rounded up or down, whichever is closest) for grade determination in accordance with the grading table below:

% of points earned	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	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Include the table linking letter grades to grade points, along with the link that accompanies it, as below.

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Policy Related to Class Attendance

Attendance and class participation is **required**. Students are expected to complete assigned readings prior to coming to class. Students needing to miss class for personal or professional reasons should consult with the instructor prior to the date on which they will be unable to attend. It is the student's responsibility to acquire any handouts or notes from a colleague in the class for any sessions missed.

Policy Related to Cell Phones and Other Media (i.e., roaming internet, checking emails, etc.)

All cell phones and other distracting media are to remain off during the duration of class. Please focus your attention on the class, lectures and class discussion as this makes for more optimal learning. Indeed, there is evidence that multi-tasking during class (i.e., checking emails, roaming the internet, etc.) results in reduced learning and conceptualization and lower grades. Per Dr. Price, there is at least one study showing direct brain-related structural changes (in bad way).

Statement of University's Honesty Policy (cheating and use of copyrighted materials)

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: www.dso.ufl.edu/judicial/procedures/academicguide.php). Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

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

Policy Related to Make-up Exams or Other Work

Students are expected to complete assigned readings prior to coming to class. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis. Students must make *prior* arrangements with Dr. Bowers if they must miss any in-class examination, and an alternative test time must be arranged.

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://oss.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/> or <http://www.health.ufl.edu/shcc/smhs/index.htm#urgent>

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 web site at: www.health.ufl.edu/shcc

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.

Class Schedule

<i>Date</i>	<i>Topic</i>	<i>Speaker</i>	<i>Assigned Readings</i>
January 9th	Course Introduction	Bowers	<u>Introduction, H&V Chapter 1</u>
January 16: Neuroanatomy			
3:15-5:15	Functional Neuroanatomy	Bauer	Blumenfeld, 2018, Chp 2
5:15-6:00	Neurologic Exam	Deeb	Blumenfeld, 2018, Chp 3
January 23: Memory & Amnesia			
3:00-3:15	Quiz 1		
3:15-4:15	Animal Models of Memory Loss	Burke	Burke et al, 2014; Hernandez et al, 2015
4:30-4:5:30	The Human Amnesias	Bauer	H&V, Chapter 16, Amnesic Disorders; Squire, 2009; Smith et al. (2010)
5:30-6:00	Discussion leaders	:	<i>Bauman, Gaynor, Ulfig</i>
January 30: Aphasia & Apraxia			
3:00-3:15	Quiz 2		
3:15- 4:15	The Classic Aphasias	Heilman	<u>H&V, Chapter 2, Aphasic Syndromes,</u> Dronkers et al (2017); Bowers handout, Watch utube video -
4:30-5:30	Apraxias – a disorder of tool use	Heilman	<u>H&V, Chapter 10, Apraxia</u>
5:30-6:00	Discussion leaders		<i>Kirsch, Warnick, Yuan</i>
Feb 6: Alzheimer’s Syndrome & dementia			
3:00-3:15	Quiz 3		
3:15 -4:15	Alzheimer’s Overview: A Disease vs A Syndrome	Wicklund	<u>Overview:</u> Bondi et al (2017) <u>Dx criteria</u> [Jack, Sperling; Albert, McKhan]; <u>MCI-</u> Peterson, 2010; Bondi, 2014; <u>Mechanism:</u> Querfurth, 2010; Williamson, 2009; Khan; 2014;
4:30-5:30	Alzheimer’s Research update	Golde	Golde (2013, 2016) ; Futch& Golde (2017)
5:30-6:00	Discussion leaders		<i>Defeis, Hromas, Ukono</i>
February 13:	No class - Join us in DC for annual International Neuropsychologica Society meeting		
February 20: Visual Agnosia & Hemispatial Neglect			
3:00-3:15	Quiz 4		
3:15-4:15	Visual Agnosia	Bauer	H&V, Chapter 11, Agnosia, H&V, Chapter 7, Visuospatial Perception
4:30-5:30	Hemispatial Neglect	Heilman	H&V Chapter 12, Neglect & Related Dis.
5:30-6:00	Discussion leaders		<i>Guzick, O’Shea</i>
February 27: Epilepsy			
3:00-3:15	Quiz 5		
3:15-4:15	Epilepsy Syndromes	TBD	Arcardi: Chapter 1-2; Hermann et al (2009,2017)
4:30-5:30	Wada, laterality, and beyond	Sullan	Chelune (1995), Hamberger et al (2011)
5:30-6:00	Discussion leaders		<i>Conlin, Grief, Lazaroe</i>

TAKE HOME EXAM (covers first 6 classes), Due March 12, 5:00 PM

March 6: No Class – Spring Break

March 13: Emotion

3:00-3:15	Quiz 6		
3:15 -4:15	Studying emotion	Bradley	TBD
4:30-5:30	Neurologic disorders of emotion	Bowers	Bowers et al. (2014, 1993); H&V, Chap 15;
5:30-6:00	Discussion leaders	<i>DeWit, Wesolowicz, Sweenie</i>	

March 20: Frontal Lobe Disorders in Animals & Humans

3:00-3:15	Quiz 7		
3:15-4:15	Frontal Lobe Syndromes: Models	Bauer	Miller & Cummings (2007) Ch 1 & 2; Stuss (2011); Prosje (2009) , Eslinger (1985); Mataro et al., 2001)
4:30-5:30	Animal Models of Exec Function	Bizon	_Hernandez et al., 2017
5:30-6:00	Discussion leaders	<i>Turner, Fidler, Gordon</i>	

March 27: Frontal Lobe Dementias

3:00-3:15	Quiz 8		
3:15-4:15	The Fronto-Temporal Dementias	Wicklund	Overview from UCSF; Reilly (2010); <i>bvFTD</i> : [Grossman, 2009; Rascovosky, 2012] <i>PPA</i> : [Bonner, 2010; Wicklund, 2014]
4:30-5:30	Vascular Dementia	Price	<i>Vas Dementia/MCI</i> : (Libon et al., 2004; Seidel et al, 2011; Wu, Brickman, et al., 2010;
5:30-6:00	Discussion leaders	<i>Wiggins, Cooke, Moore</i>	

April 3: Subcortical Disorders

3:00-3:15	Quiz 9		
3:15-4:15	Research update	Vaillancourt	Planetta ,2015, Burciu, 2015
4:30-5:30	Parkinson disease & Parkinsonism	McFarland	Troster, 2014; Lang, 2011 <u><i>CBD</i></u> : Armstrong, 2013; <u><i>MSA</i></u> : Stankovic, 2014; <u><i>DLB vs PDD</i></u> : Lippa, 2007; Klein ,
5:30-6:00	Discussion leaders	<i>Haslett, Hutchinson, Poleava</i>	

April 10: Head Injury/TBI

3:00-3:15	Quiz 10		
3:15-4:15	CTE and TBI	Dekosky	Omalu et al., 2005; 2006; Dekosky 2013; Asken et al (2017)
4:30-5:30	Current Issues in TBI	Asken	Yeats et al (2017); Vasterling et al (2009);
5:30-6:00	Discussion leaders	<i>Williams, Netz, Padron</i>	

April 17: Callosal Syndromes & Creativity

3:00-3:15	Quiz 11		
3:15-4:15	Callosal Syndromes	Belser & Fernando	H&V Chapter 13; Corballis (2017)
4:30-5:30	Creativity	Heilman	<u>H&V Chapter 18</u> : Heilman (2003)
5:30-6:00	Discussion leaders	<i>Abanish, Kang</i>	

April 24 Neuroplasticity/Rehabilitation

3:00-3:15	Quiz 12		
3:15-4:15	Intervention-Compensation	Smith	Smith (2015); Chandler et al (2017)
4:15-5:15	Neuroplasticity & Rehab	TBD	Kleim et al, 2008, Rodriguez; Crosson
4:15- 5:00	Discussion leaders	<i>Rotblatt, Douglass</i>	

FINAL EXAM: **April 24-30 (take home)**