

**University of Florida**  
**College of Public Health & Health Professions Syllabus**

**CLP 6307 HUMAN HIGHER CORTICAL FUNCTION (3 hrs)**  
**Spring Semester 2020**

Meeting Time/Place: Tuesday, 3:30 PM – 6:30 PM, HPNP Bldg, Room G-103

Delivery Format: On campus, Standard  
Course Share Drive: Canvas

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**Instructor:** Dawn Bowers, Ph.D., ABBP-CN  
Professor, CHP & Neurology

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**Appointments:** Schedule via email

**Co-Instructors:**

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David Marra, Ph.D.  
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Tatiana Vallejo-Luces  
Neuropsychology Post-Doc  
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**Class Location:** All classes will be held in the HPNP building, Room G-103. This is on ground floor of HPNP building.

**Assigned Text:** Clinical Neuropsychology, 5<sup>th</sup> 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 assigned readings will be uploaded to the Canvas course website.

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**Prerequisites.** Must be a graduate student in good standing in Clinical and Health Psychology. All others must petition or get permission of Dr. Bowers

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**PURPOSE AND OUTCOME**

**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 including cognition and emotion. The course consists of topical lectures given by faculty of the University of Florida from diverse disciplines and associated with the McKnight Brain Institute, Fixel Institute of Neurological Diseases, and the Brain Research and Rehabilitation Center. This course is designed to provide an overview 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 discussed. Presenters include clinicians and basic research scientists who are addressing complex behavior from multiple perspectives.

### **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 attention, memory, language, spatial ability, and emotion; (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, both cognitive and emotional.

### **Relation to Program Outcomes**

This course is part of the neuropsychology curriculum. Increased understanding of foundational knowledge in the fields of psychology, behavioral neurology, neuroscience and neuropsychology and its relationship to contemporary issues will improve both research and clinical missions of the field.

## **DESCRIPTION OF COURSE CONTENT**

### **Course Format**

This course will be conducted in the form of lectures by pre-imminent scientists followed by active discussion led by students. Each class will involve 1-2 designated faculty leaders with selected relevant readings on the topic of question. *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. Presentation by faculty will be followed by active discussion led by a cohort of 2-3 students who are assigned as discussion leaders. At the beginning of each class there will be brief quiz on the assigned readings for the day.

### **Course Materials & Required Readings**

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 (5<sup>th</sup> edition, 2012) along with primary source research articles-reviews. 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.

### **Location and Times**

Class will meet Tuesdays in the HPNP building (Room G103) from 3:00-6:00 PM. Please be on time. There is one exception, namely no class on Tuesday February 4<sup>th</sup>. Obviously there will be no class during spring break, the first week of March 2020.

## **ACADEMIC REQUIREMENTS AND GRADING**

### **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. Marra, Pasternak, Vallejo-Luces). There will be a take home midterm exam (due Monday March 8, 2020) and a final exam (TBD). The midterm will assess knowledge of material discussed through the February 25<sup>th</sup> class meeting, and the final exam will be comprehensive. At the beginning of each class (from 3:00-3:15) 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 12 quizzes starting with Class 2 (i.e., Classes 2-12), 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. Goal is not to lecture but engage the class in discussion.

**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 at the Fixel Institute Conference room and can be viewed remotely at the Deweese Auditorium of the MBI.
- **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 like outside speakers, ANST, etc. Currently, we are aware of one speaker, Dr. Ben Hampstead (U. Michigan) who will be speaking at ANST on Friday January 27, 2020, at 11:00 AM. Location TBD. We will keep you informed.

### 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%	Due March 1, 2020
Final Exam	40%	Due April 28, 2020
Integrative Discussion	10%	
<i>Extra Credit</i>	<i>3% max</i>	

### Grades

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

Below is table linking letter grades to grade points. Please be aware that a C- is not an acceptable grade for graduate students. The expectation is that the grade for all 'neuropsychology' courses is at least B- or above. The GPA for graduate students must be 3.0 in all 5000 level courses and above to graduate.

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 needing to miss class for personal (i.e., illness, death, etc.) or professional reasons should consult with Dr. Bowers **prior to the date** on which they will be unable to attend. This is a graduate course and missing class for social events is unacceptable. Students will still be required to complete the weekly assignment by the deadline. 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 Make-up of Exams or Quizzes**

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 the Mid-Term or Final Exams, and an alternative test time must be arranged. Students are allowed to drop 2 of the 12 quizzes for any reason, including illness or travel.

Excused absences must be consistent with university policies in the Graduate Catalog (<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>) and require appropriate documentation. Additional information can be found here: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

### **Policy Related to Guests Attending Class:**

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy: <http://facstaff.php.ufl.edu/services/resourceguide/getstarted.htm>

## **STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT**

### **Expectations Regarding Course Behavior**

By definition, this graduate course relies on active intellectual engagement and discussion among all students enrolled in this class. By nature, intellectual disagreements are valued, welcomed, and encouraged, but must be courteous and respectful. **All electronic devices (cell phone, computer, ipads, etc.) should be turned off** and not consulted during the one hour of class time. The only exception involves putting the cell phone on silent vibration for emergency purposes.

### **Academic Integrity**

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

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

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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.”**

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>  
<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

## **Online Faculty Course Evaluation Process**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

## **SUPPORT SERVICES**

### **Accommodations for Students with Disabilities**

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

### **Counseling and Student Health**

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- 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. 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: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:  
Alachua County Crisis Center:  
(352) 264-6789  
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

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.

### **Inclusive Learning Environment**

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: [www.multicultural.ufl.edu](http://www.multicultural.ufl.edu)

## Class Schedule

Tuesdays 3-6, Room G-103, HPNP

<b>Jan 14</b>				<b>Introduction, Neuroanatomy, &amp; the Neurologic Exam</b>	
3:00-3:30	Course and Requirements	Bowers		H&V Chapter 1, Introduction	
3:30-4:30	Neurologic Exam	Chapin		Blumenfeld 2018, Chapter 3	
4:40-6:30	Neuroanatomy-physiology	Bauer		Blumenfeld 2018, Chapter 2	
<b>January 21: Memory &amp; Amnesia</b>					
3:00-3:15	Quiz 1				
3:15-4:15	Animal Models of Memory Loss	Burke		Colon-Perez,2020; Hernandez (2018)	
4:30-5:30	The Human Amnesias	Bauer		H&V, Chapter 16, Amnesic Disorders; Squire, 2009	
5:30-6:00	Discussion leaders: <i>Zakrzewski, Brockman</i>				
<b>January 28: Aphasia &amp; Apraxia</b>					
3:00-3:15	Quiz 2				
3:15- 4:15	The Classic Aphasias	Heilman		Heilman (2006); Dronkers 2017, Bowers Handout, Watch U- tube video of aphasic	
4:30-5:30	Apraxias – a disorder of tool use	Heilman		H&V, Chapter 10, Apraxia	
5:30-6:00	Discussion leaders: <i>Voorhees, Boutzoukas</i>				
<b>February 4: No class - <i>Join us in Denver for annual International Neuropsychological Society meeting</i></b>					
<b>February 11: Alzheimer's Syndrome &amp; dementia</b>					
3:00-3:15	Quiz 3				
3:15-4:15	AD Overview: Disease vs Syndrome	Maraganore		TBD	
4:30-5:30	Alzheimer's Research update	Golde		Golde (2013, 2016) ; Futch et al (2017)	
5:30-6:00	Discussion leaders: <i>Turner, Cartagena, Madrid</i>				
<b>February 18: Epilepsy</b>					
3:00-3:15	Quiz 4				
3:15-4:15	Epilepsy Syndromes	Eisenschenk		Aicardi: Chapter 1-2; Hermann et al (2009,2017)	
4:30-5:30	Wada, laterality, and beyond	Crowley/Gaynor		Chelune (1995), Hamberger et al (2011)	
5:30-6:00	Discussion leaders; <i>Tocci, Ding</i>				
<b>February 25: Visual Cognition</b>					
3:00-3:15	Quiz 5				
3:15-4:15	Hemispatial Neglect	Heilman		H&V Chapter 12, Neglect & Related Dis	
<b>4:30-5:30</b>	Visual Agnosia	Bauer		H&V, Chapter 11, Agnosia, H&V, Chapter 7, Visuospatial Perception	
5:30-6:00	Discussion leaders: <i>Taylor, Eastman</i>				

**TAKE HOME EXAM (covers first 6 classes), Will be distributed Feb 25. Due Sunday March 1, midnight EST**

**March 3: No Class – Spring Break****March 10: Frontal Lobe Disorders in Animals & Humans**

3:00-3:15	Quiz 6		
3:15-4:15	Frontal Lobe Syndromes: Models	Marra	TBD 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 (unconfirmed)	TBD Hernandez et al., 2017
5:30-6:00	Discussion leaders: <i>Dion, Hanvey</i>		

**March 17: Frontal and Subcortical Dementias**

3:00-3:15	Quiz 7		
3:15-4:15	The Fronto-Temporal Dementias	Pasternak	Overview from UCSF; Reilly (2010); <i>bvFTD</i> : Grossman, 2009; Rascovsky, 2012
4:30-5:30	Vascular Dementia	Price	<i>PPA</i> : Bonner, 2010; Wicklund, 2014 <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>Evangelista, Hogan</i>		

**March 24 Head Injury & TBI**

3:00-3:15	Quiz 8		
3:15-4:15	CTE and TBI	Dekosky	Omalu et al., 2005; 2006; Dekosky 2013; Asken et al (2017)
4:30-5:30	TBI: Mechanism&Symptoms	Jaffee, Ansoanuur, Hasan	TBD Yeates et al (2017); Vasterling et al
5:30-6:00	Discussion leaders: <i>Ferguson, Moreno</i>		

**March 31: Subcortical Disorders – PD, LBD, & parkinsonisms**

3:00-3:15	Quiz 9		
3:15-4:15	PD, LBD, atypical	Armstrong	TRoster 2014, Lang 2011, CBD Armstrong <i>CBD</i> : Armstrong, 2013; <i>MSA</i> : Stankovic, 2014; <i>DLB vs PDD</i> : Lippa, 2007; Klein , ?TBD
4:30-5:30	Research update	Tansey	
5:30-6:00	Discussion leaders: <i>Meija, McNei, Koskelal</i>		

**April 7: Emotion 1**

3:00-3:15	Quiz 10		
3:15-4:15	Emotion Basics	Bradley	TBD Vrana et al., 1988; Bradley et al., 2005
4:30-5:30	Emotion & Aging	Ebner	TBD
5:30-6:00	Discussion leaders: Hausman, Huang		

**April 14 Emotion II**

3:00-3:15	Quiz 11		
3:15-4:15	Neurologic Disorders of Emotion	Bowers	Bowers et al. (2006; 2014); H&V
4:30-5:30	Emotion & PTSD	Williamson	TBD
5:30-6:00	Discussion leaders: <i>Hardcastle, Pinto, Moorman</i>		

**April 21 Approaches for Enhancing Cognition & Mood -**

3:00-3:15	Quiz 12		
3:15-4:15	Cognitive Training vs Exercise	Marsiske	TBD
4:30-5:30	Neuromodulation: TcDS	Woods	TBD
5:30-6:00	Discussion leaders: <i>Gitelman , Lopez</i>		

April 28

Final Exam Take Home due today at 8:00 PM

