

## **PSY 1470: Cognition and the Brain**

Spring 2018

Tuesday & Thursday 4:00 - 5:15 pm; Graduate School of Public Health A215

### **Course Description**

Cognitive psychologists have been exploring the human mind through behavioral studies for over fifty years. In parallel, neuroscientists have built-up an understanding of the human brain. The study of cognition in the brain, known as cognitive neuroscience, lies at the intersection of these fields, asking some of the toughest but most fascinating questions in science: How are memories stored in the brain? Is our brain pre-prepared to learn language? How does the average human brain outperform many face recognition algorithms? What is the role of sleep in cognition? We will explore these and many other questions in this course. As well as being interesting in its own right, cognitive neuroscience is having an increasing impact on our lives, such as through the developing field of ‘brain reading’ with brain scanners, or new devices that can change the brain’s activity at the push of a button. Through learning about the techniques used by cognitive neuroscientists and reading studies first-hand, students will come away with an understanding of this cutting-edge field and their own brain.

### **Instructor**

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### **Required Reading**

J Ward. *The Student’s Guide to Cognitive Neuroscience, 3<sup>rd</sup> Edition* (2015)  
Additional reading papers will be posted online (see course schedule below)

### **Supplementary Reading (if desired)**

MS Gazzaniga, RB Ivry, GR Mangun. *Cognitive Neuroscience: The Biology of the Mind.* 4<sup>th</sup> Ed. (2013)

### **CourseWeb: <https://courseweb.pitt.edu>**

Additional readings, lecture slides, sample questions and more will be posted on the course site.

### **Office Hours**

Weekly office hours are held for students to discuss course material, psychology, neuroscience, life, the universe, and everything. No appointment or notice is necessary - just turn up! These are held on Wednesdays 11–12pm (office address above). If you have another class at that time and would like to meet, please let me know and we can find a more convenient time. After class is usually a good time to ask brief questions or schedule appointments.

### **In-class**

I understand that students may sometimes need to arrive late for class or leave early. Please attempt to do this with minimal disruption for the benefit of your fellow students. If you anticipate needing to arrive late or leave early on a regular basis, please inform me. If late arrivals or early departures begin to cause too much disruption, this policy may be revised. I will end class approximately 1-2 minutes early to allow you to pack up before going to your next class. Please do not make noise by packing up before I formally end class because this will disrupt your fellow students and me.

Asking relevant questions during class is *strongly* encouraged. Please raise your hand if you have a comment or question and share it with your classmates.

Please turn off or silence your cell phone when you enter the classroom. Talking or other disruptive behavior (including cell phone use, text messaging, or emailing) during class will not be tolerated because it will reduce the other students' and the instructor's ability to concentrate. Computers may be used to take notes, but please do not keep them open during video viewing because they make it more difficult to view the screen. At the discretion of the instructor, disruptive students will be penalized points toward their final grade.

### **Earning your grade**

Each student's final course grade will be calculated from: attendance (10%), midterm (35%), group presentation (20%) and final exam (35%).

#### *Attendance*

Once the add/drop period is over, attendance will be required, because everyone's learning experience is helped by healthy discussion during the lectures and class presentations. You can miss up to two classes without your grade being affected. I highly recommend saving these until you need them. The class will not simply be a presentation of what is in your textbook (new material will be presented). If you do miss a lecture, you should contact a fellow student to determine missed information, such as lecture notes. It is not possible to get this information from the instructor. In preparing for exams, you will be responsible for all material presented in class.

#### *Exams:*

The multiple-choice exams can cover any material in the lectures or assigned readings (since the last exam). Sample exam questions and answers will be available on CourseWeb.

#### *Group Presentations:*

All students are required to participate in a group presentation of several assigned research articles. Students will be randomly assigned to groups of six early in the course. During their assigned session, students will work together to present synopses readings, and lead a discussion. Students are encouraged to be creative when it is their turn to lead discussions in order to promote active participation. Students should prepare a written plan of what they will present (e.g., notes for article synopses, a list of open-ended questions and topics to discuss, etc.), which they should submit to the instructor one week before their session. Grades for the group will be awarded based on the accuracy and clarity of their presentation. If an emergency interferes with your attendance on the day of your group's presentation, you must make arrangements with me as soon as possible in advance.

#### *Grades:*

Grades for assignments and the overall course will be mapped onto letter grades as follows:

As = 90 – 100 (90 - 92 = A-; 93 - 96 = A; 97 - 100 = A+)

Bs = 80 – 89

Cs = 70 – 79

Ds = 60 – 69

F = 59 and below

#### *Make-up Policy:*

Only an authorized university absence will be accepted as a reason for rescheduling an exam. Students who are genuinely unwell should contact the instructor *before* an exam to discuss taking an alternative exam on a different day.

### *Re-grading:*

If you have a concern about a possible error in grading, you must submit your concern in writing no more than one week after the exam is returned. No requests will be considered beyond this date. If you submit a request, the work will be fully re-graded and could receive a higher or lower grade.

### **Academic Integrity**

All students are expected to adhere to the standards of academic honesty. Any student engaged in cheating, plagiarism, or other acts of academic dishonesty would be subject to disciplinary action. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity at <http://provost.pitt.edu/faculty-resources/academic-integrity-freedom/academic-integrity-guidelines>. This may include, but is not limited to the confiscation of the examination of any individual suspected of violating the University Policy.

Cheating will not be tolerated in this course. Cheating includes but is not limited to: looking at the exam of a fellow student, a text, or a study guide, writing information on note cards, your body, your desk, a cell phone, or your clothing to look at during an exam. Furthermore, no student may bring any unauthorized materials to an exam, including dictionaries and programmable calculators. It is also cheating if you help another student with an exam. Plagiarism includes copying the work of another student and showing your work to another student. In this course, a student who is found cheating or plagiarizing will receive an F for the course and will be reported to the Dean. Please do not do anything that would make me or the exam proctors suspect that you are cheating!

### **Disability Resources and Services**

If you require special accommodations or classroom modifications, please notify both the instructor and Disability Resources and Services by the end of the first week of the term. The office of Disability Resources and Services is located in 140 William Pitt Union (412-648-7890 [voice or TDD]), and their website is at: <http://www.drs.pitt.edu/>. If you have a physical, learning, or emotional disability, please let me know as early as you can so that I can accommodate you. Arrangements for disability exams must be made through the DRS office a minimum of one week before the in-class exam date.

### **Accessibility**

Blackboard is ADA Compliant and has fully implemented the final accessibility standards for electronic and information technology covered by Section 508 of the Rehabilitation Act Amendments of 1998. Please note that, due to the flexibility provided in this product, it is possible for some material to inadvertently fall outside of these guidelines.

### **Copyright notice**

These materials and those presented during class may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

### **Statement on classroom recording**

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be solely for the student's own private use.

### **Courtesy**

You are expected to arrive to class on time and inform your instructor if you must leave early regularly. Keep in mind that it is generally unacceptable to leave class early. Courteous behavior includes staying on-task during the class, respecting the opinions of others, and coming to class prepared. Additionally, you are expected to use professional language in class and in written communication (including email). E-mails that are written in an unprofessional manner (i.e., grammatically incorrect, typos, misspellings, overly informal) are considered unacceptable.

### **Diversity and inclusion**

I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming, and inclusive environment for every other member of the class.

### **Student assistance and counseling**

Everyone feels overwhelmed by the challenges of being a student at times. I am here to help you. If you have any issues that you would like to discuss with the instructor in confidence, please schedule an appointment. Please note that I am not a counselor but can direct you to a place where you can get help. If you need someone to talk to at any point, there are several on-campus resources:

One option is the University Counseling Center (a free, confidential service). They can be reached at 412-648-7930, and are located at 334 William Pitt Union (after hours call 412-624-2121).

Another option is the Psychology Department's Clinical Psychology Center (see <http://www.pitt.edu/~clinic/>). They can be reached at 412-624-8822.

Sexual assault services are given at the Sexual Assault Services Center, which is located at 334 William Pitt Union (phone: 412-648-7930; after hours call: 412-648-7856).

For emergency psychiatric care, please go to the nearest emergency room, or the Diagnostic Evaluation Center at Western Psychiatric Institute and Clinic at 3811 O'Hara St. They can be reached at 412-624-1000.

### **Class schedule**

The class schedule is subject to change - updates will be announced during the semester in class and on CourseWeb. Please make every effort to complete the assigned reading prior to class. Research shows that students understand new information better when they have a framework for understanding. Reading the chapter will provide a good framework for understanding the information presented during class.

Date	Lecture Topic	Textbook Chapter	Articles *
Tues Jan 9	Introduction to Cognitive Neuroscience	1	
Thurs Jan 11	Neuroanatomy	2	
Tues Jan 16	Methods 1	3	
Thurs Jan 18	Methods 2	4	
Tues Jan 23	Methods 3	5	

Thurs Jan 25	Perception 1	6	
Tues Jan 30	Perception 2	6	
Thurs Feb 1	VISITOR TALK (4 – 5pm)		
Tues Feb 6	PRESENTATION GROUP 1		
Thurs Feb 8	Object and Face Recognition	6	1
Tues Feb 13	Attention	7	
Thurs Feb 15	Language	11, 12	
Tues Feb 20	PRESENTATION GROUP 2		
Thurs Feb 22	MIDTERM EXAM		
Tues Feb 27	Long-term Memory 1	9	
Thurs Mar 1	VISITOR TALK (4 – 5pm)		
Tues Mar 6	SPRING BREAK		
Thurs Mar 8	SPRING BREAK		
Tues Mar 13	Long-term Memory 2	9	2
Thurs Mar 15	PRESENTATION GROUP 3		
Tues Mar 20	Sleep and Memory		3
Thurs Mar 22	Working Memory		4, 5
Tues Mar 27	Psychological Disorders (guest lecture)		
Thurs Mar 29	PRESENTATION GROUP 4		
Tues Apr 3	Emotion and Social Cognition	15	
Thurs Apr 5	VISITOR TALK (4 – 5pm)		
Tues Apr 10	PRESENTATION GROUP 5		
Thurs Apr 12	Implications for Law and Society		6, 7
Mon Apr 16	TWO OPTIONAL REVIEW SESSIONS (TIMES TO BE VOTED ON BY CLASS)		

\* Articles available on CourseWeb