# Psychology 5362: Cognitive Neuroscience Fall 2020

Tuesdays & Thursdays, 2:00 - 3:20 p.m., room UAC 206

INSTRUCTOR: Dr. Carmen Westerberg PHONE: 512-245-3152
OFFICE: UAC 259 EMAIL: cw54@txstate.edu
OFFICE HOURS: Tues and Thurs, 11:00 am – 12:00 pm, or by appointment. Please schedule a Zoom session by sending the instructor an email at least 24 hours in advance.

#### **COURSE OBJECTIVES:**

PSY 5362 provides a comprehensive introduction to cognitive neuroscience; the study of the biological basis of human cognition. Contemporary scientific study of the biological structures and processes that support perception, attention, memory, emotion, language, executive functions, and decision-making will be covered. This is a seminar course that will include lectures and discussions of recent research that pertains to each topic.

Prerequisite: C or better in PSY 3322 or equivalent.

## **LEARNING OUTCOMES:**

After completing this course, students will have mastery of:

- The methods used to examine relationships between the brain and cognition
- The anatomy and physiology of biological processes that give rise to cognition
- The ability to comprehend and evaluate current cognitive neuroscience research

#### RECOMMENDED TEXTBOOK:

Purves, D., Cabeza, R., Huettel, S.A., LaBar, K.S., Platt, M.L., & Woldorff, M.G. (2013). *Principles of Cognitive Neuroscience, 2<sup>nd</sup> Edition*. Sunderland, MA: Sinauer Associates, Inc. ISBN: 978-0-87893-573-4. Readings are listed in the course outline below. The textbook is not required to be successful in this class, but is recommended.

## ATTENDANCE POLICY:

Attendance is not required but is strongly encouraged. Discussion points are also awarded on designated days. However, if you are feeling sick, do NOT come to class! Instead, email the instructor and alternative arrangements will be made or an alternative assignment will be given.

During the first week of class, a class seating chart will be circulated, and the seat you choose will be your assigned seat for the rest of the semester. Please be sure to sit there every day. If you sit in a different seat, please inform the instructor immediately.

## **DISRUPTIONS TO ROUTINE INSTRUCTION:**

In the event that the pandemic or other circumstances prevent class to proceed normally in a face-to-face format, the instructor will post an announcement on the CANVAS site and email students as soon as possible. If this happens, the course will continue to meet synchronously through Zoom.

## **CAMPUS HEALTH, WELLNESS, AND SAFETY:**

All students should follow the <u>10 Guiding Principles for Health, Safety, and Wellness</u> at Texas State. In particular, **all students are required to wear a cloth face mask** while in class and **perform a <u>self-assessment</u> each day** before coming to campus.

#### **BOBCAT PLEDGE:**

Being part of our Bobcat community means we respect each other and commit to helping create a healthy and safe learning and working campus environment. Every student, faculty and staff member must take responsibility for practicing healthy behaviors and following the health and safety guidelines established by Texas State to prevent the spread of COVID-19 on campus and in the surrounding community. All members of the Bobcat community are asked to take the Bobcat Pledge. **As a member of the Bobcat community, I PLEDGE TO:** 

## 1. RESPECT OTHERS

- Wear a face covering in all indoor public spaces
- Maintain physical distancing of at least 6 feet where possible
- Wear a face covering outdoors when physical distancing is not possible
- Stay home if sick, or if I have symptoms of COVID-19, or if I have had prolonged direct contact with someone who has tested positive for COVID-19

## 2. RESPECT MYSELF

- Wash my hands often with soap and water and use hand sanitizer frequently
- Complete a daily self-assessment to check for COVID-19 symptoms
- Seek medical evaluation if I am sick, or if I have symptoms of COVID-19, or if I have had prolonged direct contact with someone who has tested positive for COVID-19
- Avoid crowded activities or social gatherings where physical distancing is not possible or where others are not wearing face coverings

## 3. RESPECT OUR TXST COMMUNITY

- If I test positive for COVID-19, or have had prolonged direct contact with someone who has tested positive, I will notify the Student Health Center
- Follow CDC and university guidance on testing, contact-tracing, self-isolation and quarantine when appropriate
- Practice these health and safety measures all the time, whether I am on campus, in the community, or at home

For more information of the safe return of students to campus, please visit the <u>Student Roadmap</u> to return.

## STATEMENT ON CIVILITY AND COMPLIANCE IN THE CLASSROOM:

Civility in the classroom is very important for the educational process and it is everyone's responsibility. If you have questions about appropriate behavior in a particular class, please address them with your instructor first. Disciplinary procedures may be implemented for refusing to follow an instructor's directive, refusing to leave the classroom, not following the university's requirement to wear a cloth face covering, not complying with social distancing or sneeze and cough etiquette, and refusing to implement other health and safety measures as required by the university. Additionally, the instructor, in consultation with the department chair/school director, may refer the student to the Office of the Dean of Students for further disciplinary review. Such reviews may result in consequences ranging from warnings to

sanctions from the university. For more information regarding conduct in the classroom, please review the following policies at <u>AA/PPS 02.03.02</u>, Section 03: Courteous and Civil Learning Environment, and <u>Code of Student Conduct</u>, number II, Responsibilities of Students, Section 02.02: Conduct Prohibited.

## **CANVAS:**

All course materials including lecture slides, assignment instructions, and discussion articles will be posted on the CANVAS site for the course. Announcements, grades, and other information will also be posted on CANVAS. Access CANVAS using your netID at <a href="https://discovery.canvas.txstate.edu/">https://discovery.canvas.txstate.edu/</a>.

## **COPYRIGHT STATEMENT:**

My lecture slides are my own original creations and they are under the protection of U.S. copyright laws. Although you are authorized to take notes from these slides and create a derivative work, the authorization extends only to making one set of notes for your own personal use and no other use. You are not authorized to post your notes or the slides online or to make any commercial use of them without my prior permission.

## **TECHNOLOGY REQUIREMENTS:**

At a minimum, this course will require you to use the CANVAS site to access lectures, turn in assignments, and view class announcements. As a student in this course, each of you is responsible for arranging your own reliable internet connection. TX State may be able to provide you with technology, software, and support through the IT Assistance Center. Contact them through this link (ITAC) to learn more. ITAC should be your first point of contact in the event of technical problems because they are the experts. However, if technical problems interfere with your ability to turn in assignments by the established deadlines, you should also send a time-stamped screenshot and description of the problem to the instructor. The instructor will then contact ITAC to verify the technical problem.

## **STUDENTS WITH SPECIAL NEEDS:**

If you are a student with a disability who will require accommodation(s) to participate in this course, please contact me as soon as possible. It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, contact the Office of Disability Services as soon as possible at 512-245-3451 to establish reasonable accommodations. Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

## SEXUAL MISCONDUCT REPORTING:

Effective January 2, 2020, state law (SB 212) requires all university employees, acting in the course and scope of employment, who witness or receive information concerning an incident of sexual misconduct involving an enrolled student or employee to report all relevant information known about the incident to the university's Title IX Coordinator or Deputy Title IX coordinator. According to SB 212, employees who knowingly fail to report or knowingly file a false report shall be terminated in accordance with university policy and The Texas State University System Rules and Regulations.

#### **EMERGENCY MANAGEMENT:**

In the event of an emergency, students, faculty, and staff should monitor the <u>Safety and Emergency Communications web page</u>. This page will be updated with the latest information available to the university, in addition to providing links to information concerning safety resources and emergency procedures. Faculty, staff, and students are encouraged to sign up for the <u>TXState Alert</u> system.

## **ACADEMIC HONESTY:**

The following information is directly quoted from the policy statement of the Texas State University System (<a href="http://www.txstate.edu/effective/upps/upps-07-10-01.html">http://www.txstate.edu/effective/upps/upps-07-10-01.html</a>).

<u>Honor Code</u>: As members of a community dedicated to learning, inquiry, and creation, the students, faculty, and administration of our University live by the principles in this Honor Code.

- We are conscientious. We complete our work on time and make every effort to do it
  right. We come to class and meetings prepared and are willing to demonstrate it. We
  hold ourselves to doing what is required, embrace rigor, and shun mediocrity, special
  requests, and excuses.
- We are respectful. We act civilly toward one another and we cooperate with each other. We will strive to create an environment in which people respect and listen to one another, speaking when appropriate, and permitting other people to participate and express their views.
- We are honest. We do our own work and are honest with one another in all matters.
   We understand how various acts of dishonesty, like plagiarizing, falsifying data, and giving or receiving assistance to which one is not entitled, conflict as much with academic achievement as with the values of honesty and integrity.

<u>Violation of the Honor Code</u> includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion and the abuse of resource materials.

- Cheating means engaging in any of the following activities: (1) copying from another student's test paper, laboratory report, other report, or computer files, data listings, or programs; (2) using, during a test, materials not authorized by the person giving the test; (3) collaborating, without authorization, with another person during an examination or in preparing academic work; (4) knowingly, and without authorization, using, buying, selling, stealing, transporting, soliciting, copying or possessing, in whole or in part, the contents of an unadministered test; (5) substituting for another student or permitting another person to substitute for oneself in taking an examination or preparing academic work; (6) bribing another person to obtain an unadministered test or obtain information about an unadministered test; and (7) purchasing, or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm.
- *Plagiarism* means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit.
- *Collusion* means the unauthorized collaboration with another person in preparing written work offered for credit.
- Abuse of resource materials means the mutilation, destruction, concealment, theft or alteration of materials provided to assist students in the mastery of course materials.

Academic penalty will be imposed in cases involving violation of academic honesty. Cheating, plagiarism, or collusion on an exam or assignment will result in a grade of 0 for that exam or assignment and a one grade reduction of the final grade (e.g., if a "B" is earned based on academic performance, a "C" will be assigned). All other violations of the honor code will be handled on a case-by-case basis and may include a requirement to withdraw from the course with a grade of "F" or a "W".

## **GRADING:**

Grades will be based on your performance on three essay exams, two article presentations, participation in class discussions, and two article reviews.

**Essay exams:** Three essay exams will be given throughout the semester. Missing an exam day is strongly discouraged. There will be no make-up exams without proper documentation of a reasonable excuse, and the "reasonability" of the excuse is at the sole discretion of the instructor.

**Article presentations:** Six days during the semester (see outline below) the class will discuss recent articles in cognitive neuroscience, corresponding to the lecture topic from the previous class day(s). Each student will lead class discussion of an article two times during the semester. See separate handout for guidelines.

**Discussion participation:** Each student is expected to actively participate in class discussions of recent articles in cognitive neuroscience. Up to 5 points will be awarded for your participation in the discussions. Students are required to read each article before class and generate discussion questions in advance. These questions should be handed in to the CANVAS site BEFORE the start of the class period. Failure to do so will result in a loss of discussion points. Students do not need to generate questions for the articles they are presenting to the class. If you miss an article discussion day, an alternative assignment may be completed to make up the lost points with proper documentation of a reasonable excuse for missing class.

**Article reviews:** Two written reviews of recent journal articles in cognitive neuroscience are required. Instructions for the reviews will be distributed separately during class.

Grades will be determined as follows:

<u>Item</u>	% of final grade	# of points
Essay exams (3)	45% (15% each)	90 (30 pts each)
Article presentations (2)	20% (10% each)	40 (20 pts each)
Discussion participation (6)	15% (2.5% per day)	30 (5 pts per day)
Article review #1	5%	10
Article review #2	15%	30
Total	100%	200

The following grading scale will be used:

90-100%: A 80-89%: B 70-79%: C 60-69%: D <60%: F

## **COURSE OUTLINE**

<b>Date</b> Tu 25-Aug	Topic Introduction	Recommended Reading Chapter 1	
Th 27-Aug	Cognitive Psychology and Neuroscienc	e Chapter 1	
Tu 1-Sept	Neuroscience Review	Chapter 1, Appendix	
Th 3-Sept	Methods in Cognitive Neuroscience I	Chapter 2	
Tu 8-Sept	Methods in Cognitive Neuroscience II	Chapter 2	
Th 10-Sept	Methods in Cognitive Neuroscience III	Chapter 2	
Tu 15-Sept	Article Presentation and Article Review Introduction, Exam 1 Review		
Th 17-Sept	Exam 1		
Tu 22-Sept	Visual Perception I	Chapter 3	
Th 24-Sept	Visual Perception II	Chapter 3	
Tu 29-Sept	Article Discussion #1		
Th 1-Oct	Attention I	Chapters 6,7	
Tu 6-Oct	Attention II	Chapters 6,7	
Th 8-Oct	Article Discussion #2		
Tu 13-Oct	Memory I **Article Review #1 due	Chapter 8	
Th 15-Oct	Memory II	Chapter 9	
Tu 20-Oct	Article Discussion #3, Exam 2 Review		
Th 22-Oct	Exam 2		
Tu 27-Oct	Emotion I	Chapter 10	
Th 29-Oct	Emotion II	Chapter 10	
Tu 3-Nov	Article Discussion #4		

Th 5-Nov	Language I	Chapter 12
Tu 10-Nov	Language II	Chapter 12
Th 12-Nov	Article Discussion #5	
Tu 17-Nov	Executive Functions	Chapter 13
Th 19-Nov	Decision Making	Chapter 14
Tu 24-Nov	Exam #3 Review	
Th 26-Nov	NO CLASS THANKSGIVING	
Tu 1-Dec	Article Discussion #6	
Th 3-Dec	Exam 3	

FINAL ARTICLE REVIEW DUE: Tuesday, 8-Dec 5:00 p.m.