

Psychology 366: COGNITIVE NEUROSCIENCE

SPRING 2021 - 3 credit hours (CRN: 35758)

Tue & Thur 11 am to 12:15 am

(ONLINE CLASS)

Instructor: Alessandra M. Passarotti, PhD

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Online office hours: By Appointment (Thursdays 12:30 – 1:30 pm).

Teaching Assistants:

Rachel Donka

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Online Office hours: By Appointment (Mondays, 1 to 3 pm)

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Rachel Schroeder

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Online Office hours: By Appointment (Tuesdays 10 to 11 am)

Note on Office Hours: Since office hours are online (via Blackboard Collaborate), please email the Instructor and TA 24 hours in advance for an appointment. Appointments will ensure that we have plenty of time to dedicate to each student, and that students do not have to wait for their turn online. If you cannot meet during office hours, please email us some potential days/times and we can schedule a meeting for another day.

Prerequisite: Grade of C or better in Psch 242.

Required Textbook: “Cognitive Neuroscience, The Biology of the Mind”. 5th Edition, Gazzaniga, Ivry & Mangun, Norton and Co., 2018.

Welcome to Psch 366: Cognitive Neuroscience. Our goal for this class is to make learning as impactful as possible this semester, while also acknowledging the stress and anxiety you may be feeling about the uncertainties in your daily routines and educational experiences related to COVID-19. We will strive to abide by two overarching principles: 1) engage in clear and frequent two-way **communication** regarding our expectations of you, the class workflow, and unexpected challenges arising that may impede your participation in required class sessions, including exams, or timely completion of assignments; 2) build an **inclusive learning community** in which we all abide by the same ground rules and ethical code of conduct. We look forward to connecting with you this semester. We will do our best to support your learning experience by listening to your needs and by conducting this course with compassion, empathy, and patience.

Readings: Lecture notes, readings, study guides and instructions for assignments will be posted on Blackboard (<http://blackboard.uic.edu>) every week. Please make sure that you have access to Blackboard for this class, and that you can receive class emails through your UIC email account.

Course Description. This course will cover the foundations of Cognitive Neuroscience, and provide students with a thorough understanding of the neural bases of cognition, affect, and human behavior. In particular, the course will focus on neuroanatomy, hemispheric specialization and brain development, vision, audition, as well as higher order cognitive functions, such as attention, language, executive functions, learning and memory, consciousness and emotion regulation. Students will learn important skills to evaluate current research in Cognitive Neuroscience. They will learn to critically evaluate published findings on brain functioning and organization, scientific literature and interpret scientific data to address specific research questions. Moreover, students will learn about brain imaging techniques (e.g. fMRI, EEG) used in cognitive neuroscience to examine cognitive and affective functions. Student will also participate in online experiments, and write short research essays on cognitive neuroscience paradigms and research findings using APA format.

Our Inclusive Learning Environment. UIC values diversity and inclusion. We will do our best to make every student feel welcome, engaged, and respected for their opinions. Regardless of age, disability, ethnicity, race, gender, gender identity, sexual orientation, socioeconomic status,

geographic background, religion, political ideology, language, or culture, we expect all members of this class to contribute to a respectful, welcoming, and inclusive environment for every other member of our class. If there are aspects of the instruction or design of this course that result in barriers to your inclusion, engagement, accurate assessment or achievement, please notify the Instructor as soon as possible.

Synchronous Class Format and Attendance. This class will be online, and it will be “synchronous”. For the vast majority of the meetings we will have **“live” online classes, on T/R from 11 to 12:15 pm, starting on 1/12/2021.** Lectures will cover the Instructor’s lectures notes, assigned materials, class discussions and class activities. **To join the live online class please click on "Collaborate" in Blackboard. You will then be prompted to join the class session.** Occasionally there may be some pre-recorded lessons. Students will be informed in advance when this the case.

Online Attendance. Studies show that students who attend class regularly learn more and do better with the class. The class sessions will be as interactive as possible. Therefore, your participation is essential. Attendance is greatly recommended, in order to be more engaged with the class community, learn about the class experiments and report writing, and be fully engaged with the class research activities.

Communicating in Class. We understand that it is much easier to talk and ask questions during a face-to-face class than during an online class. However, we are trying to re-create the in-person class interactions as much as possible. Please do not feel intimidated, your questions and comments are always very welcome! The Instructor will often ask if there are any questions and leave some time for students to ask them. Please use your microphone as much as possible for questions. The instructor will also answer the Blackboard chat messages during times set aside for this purpose. While we want to ensure that everybody feels included and respected during our classes, also please be respectful toward others while asking/answering questions or making comments. Please be kind to one another, and keep an open mind about different cultural aspects, different points of views and scientific opinions. Actions, text messages and talks that are disrespectful to students or the Instructor, and that disrupt the classroom will be reported to the appropriate UIC officials.

NOTE: We will usually record the synchronous class sessions for students who are unable to attend synchronously. The recording feature for others is disabled so that no one else will be able to record this session. The recorded class sessions will be posted on our Blackboard class website unless otherwise notified. If you have privacy concerns and do not wish to appear in the recording, turn OFF your video and notify the Instructor in writing (via email) asap and prior to the next class session. If you would like to ask a question, you may do so privately through the chat feature by addressing your question to me or the TA only (and not to “everyone”), or you may contact me or your TA by another private method, which we will agree upon in advance of class. If you have questions or concerns about this video recording policy, please contact the Instructor before the end of the first week of class.

E-mail Communications. E-mail is the best way to reach us! Please email us with any questions or concerns you may have about the course and study materials. *Prompt communication is a smart strategy to ensure that we can help you effectively!* When you contact us by email please include “psch 366” in the subject line, since we teach a few different classes. We will check emails during weekdays, or regular business hours, M - F (9 am to 5 pm) and will return your email within 24 - 48 hours.

Blackboard. Our Blackboard course site (<http://blackboard.uic.edu>) has been organized to facilitate both access to course materials and to a broad array of UIC campus resources and community information such as advising support, online events, health and wellness tools, etc. The information is provided at the university, college, and department/course levels to help you more efficiently navigate to the resources and tools you need to be successful in your courses this semester. Students are expected to log into the course site regularly to learn about any developments related to the course as well as to upload assignments and communicate with classmates. For all technical questions about Blackboard, email ACCC Learning Technology Solutions at LTS@uic.edu.

Please get started by checking these important Blackboard folders on the Main Menu:

- **Syllabus.** A very detailed class syllabus includes course requirements, assignments and grading policies, as well as the weekly schedule and topics. Please read the syllabus carefully and let us know if you have any questions.

- **Getting Started.** This folder contains general information about Blackboard, technical requirements, general UIC resources, online etiquette guidelines, and how to get textbooks at UIC.
- **About this Course.** This folder contains general information about the Course content and organization, the course learning objectives, and information about the Instructor and TAs.
- **Weekly Content Folder.** Every week lecture notes, assignment instructions, and class materials are posted on Blackboard under the folder “Weekly Content” (weeks 1-15). Please check this folder at the beginning of each week to know what you need to work on, and any dues assignments, for any given week.
- **Class Announcements.** Please check Class Announcements regularly, in order to be up-to-date with all the important information for the class.
- **Discussion Forum.** A few extra-credit opportunities may be offered via the Discussion Forum, as a useful tool to engage students in guided class discussions. Students will be informed in advance when extra-credit opportunities are offered.
- Additional folders are going to be created on Blackboard for exams, research essays, study guides, exam practice questions, final paper instructions etc.

COURSE REQUIREMENTS AND GRADES

The final grade will be obtained from scores on: 4 exams, two research experiments/essays, plus extra credit points accumulated during the semester.

- **EXAMS.** Four non-cumulative exams will be administered during class times. The first three exams will have a multiple choice and short essay format, while the last exam will have only a multiple choice format. All exams will be administered online through Blackboard. Each exam will cover lecture content, book chapters, class discussions and activities, videos and case studies. Study Guides will detail the topics covered in the exams. Unless otherwise noted, the exams need to be completed within 3 hours from posting (within 6 hours for students with a Letter of Accomodation). Note that any

evidence of plagiarism will result in a score of zero. Please let us know asap if there is a time conflict with the scheduled exams.

- **Make-up Exams.** Make-up exams with no penalties will be granted only in case of family or personal emergencies, illness, catastrophes or valid events, that will need to be documented (e.g., doctor's note; a relative's death certificate; religious holiday). For make-ups the student needs to contact the Instructor and TA, either before the exam or within 24 hours from the missed exam. If a student misses an exam but cannot provide any documentation on their emergency, they can take the exam within 2 days from the exam date, with a 20% penalty for every late day. When you have problems or challenges please email us as soon as possible! That is the best strategy to ensure that we can help you!
- **Two Research Essays.** Two short research essays (3 pages long), in APA format, will be due on 2/18 and 4/1. Each essay is based on an experiment discussed in class. In order to prepare for writing up each report, students need to run through a cognitive neuroscience experiment provided via the free App "ZAPS" that comes with our textbook. Instructions about these assignments will be explained in class and posted on Blackboard. Please talk to the TAs and Instructor as soon as possible if you have questions about these assignments. Papers must be uploaded on Blackboard and will automatically run through SafeAssign to check for plagiarism.
- **Extra-credit Essay.** An extra-credit paper (2 pages; 8 points) in a format similar to the research essays, will also be offered and will be due by 4/22. Instructions will be posted.
- **Discussion Forum.** There may be a few discussion forum questions as part of extra-credit opportunities. Students will be informed in advance when this is the case.
- **Attendance and Participation in Research Activities.** This online class will provide, as much as possible, a few 'hands-on' experiences with cognitive neuroscience research. Your class attendance and engagement is essential to your success. In addition to attending the live class sessions, each student will be expected to devote some time to run through a few experiments provided via the free textbook App "ZAPS".

Personalized Feedback. Please reach out to the TAs and Instructor if you have questions or want to receive a more personalized feedback, or advice on future assignments. Please take advantage of our office hours to get personalized feedback and help with exams or papers.

Make-up Exams or Assignments. Make-up exams or assignments will be granted only in case of family or personal emergencies, illness, catastrophes or valid events, that will need to be documented (e.g., doctor's note; a relative's death certificate; religious holiday). Students need to contact the Instructor and TA, before the exam or before deadlines for assignments. No make-ups are offered for extra-credit opportunities.

Policy on late work. Late papers will be accepted but 10% of the points will be deducted for each day past the deadline. Both week and weekend days count as late days. For example, if an assignment is turned in 3 days late a 30% penalty will be applied to the paper grade, even if two of these days are saturday and sunday. Late assignments may not have a penalty in case of personal/family emergencies or catastrophes or for valid events (e.g., religious holidays) that will need to be documented. Late work is not accepted for extra-credits.

GRADING POLICY: Final grades will be determined by total points as follows:

<i>Course Requirements</i>	<i>Points</i>	<i>Grade Percent</i>
Exam 1	70	20%
Exam 2	70	20%
Exam 3	70	20%
Exam 4	80	23%
2 Research Essays (30 pts each)	60	17%
Total	350	100%

<i>Grade</i>	<i>Points</i>
A: 90 to 100%	315 - 350
B: 80 to 89%	280 - 314
C: 70 to 79%	245 - 279
D: 60 to 69%	210 - 244
F: 0 to 59%	0 - 209

NOTE: All points obtained from exams and assignments, as well as extra credit points, are added up, as a simple addition, to obtain the final grade. Extra credit points are added to the total score (for instance, if a student has a total score of 310 from exams and assignments, and has also collected 10 extra-credit points, their total score is 320/350, which would result in an A). Regarding the final grade, if a final sum of points is at least .5 away from the next higher raw point, it will be rounded up to the next higher point (e.g., 330.5 will be rounded up to 331).

Note on the “Incomplete” option: Following departmental guidelines, Incompletes are granted only for a documented personal or family emergency towards the end of the semester, that prevent a student from attending class and completing the last few assignments. Incompletes are not given to students who have not turned in their work regularly from the beginning of classes, or throughout the semester. Incompletes are granted as a result of a prompt conversation with the Instructor, and are never given on a very short notice or at the last moment. The student needs to discuss their emergency with the Instructor asap, and at least a week before the end of the classes, to agree on a plan for finishing their assignments in a timely fashion. Failure to communicate promptly with the Instructor will result in the Instructor not granting an Incomplete.

Disability Services Notification and LOAs. Students who have a **letter of accommodation (LOA)** should email the Instructor by the end of the first week to let them know of the LOA, and provide a pdf of the letter, so that we can start planning on the best way to help. Students with LOAs will automatically receive 48-hours extension on any written assignment, and double the time on exams.

UIC is committed to full inclusion and participation of people with disabilities in all aspects of university life. Students who face or anticipate disability-related barriers while at UIC should connect with the **Disability Resource Center (DRC)** at drc@uic.edu, or at (312) 413-2183

(voice) or (312) 413- 0123 (TDD) to create a plan for reasonable accommodations. In order to receive accommodations, students must disclose disability to the DRC, complete an interactive registration process with the DRC, and provide their course instructor with a Letter of Accommodation (LOA). Course instructors in receipt of an LOA will work with the student and the DRC to implement approved accommodations

http://www.uic.edu/depts/oar/campus_policies/disability_notification.html.

Holidays and Religious Days of Special Observance. Please let us know if you need to miss class or need to reschedule an exam due to a religious holiday. See <https://oae.uic.edu/religious-calendar/>.

Our Community Agreement. By submitting your assignments for grading you acknowledge these terms, you declare that your work is solely your own, and you promise that, unless authorized by the instructor or proctor, you have not communicated with anyone in any way during an exam or other online assessment. Let's embrace what it means to be a UIC community member and together be committed to the values of integrity. Let us commit to upholding a class "**Honor Code**" in which we trust one another and engage only in behaviors that reflect our community standards of academic integrity.

Academic Integrity, Cheating or Plagiarism - Student Community Standards. UIC is an academic community committed to providing an environment in which research, learning, and scholarship can flourish and in which all endeavors are guided by academic and professional integrity. In this community, all members including faculty, administrators, staff, and students alike share the responsibility to uphold the highest standards of academic honesty and quality of academic work so that such a collegial and productive environment exists. As a student and member of the UIC community, you are expected to adhere to the Community Standards of integrity, accountability, and respect in all of your academic endeavors. When accusations of academic dishonesty occur, the Office of the Dean of Students investigates and adjudicates suspected violations of this student code. Unacceptable behavior includes cheating, unauthorized collaboration, fabrication or falsification, plagiarism, multiple submissions without instructor permission, using unauthorized study aids, coercion regarding grading or evaluation of coursework, and facilitating academic misconduct. What is plagiarism? A student who submits a paper (or parts of a paper) that they or others wrote for other classes, or a paper which in whole

or part has been written by someone else, or which contains passages quoted or is paraphrased from another's work without acknowledgement (quotation marks, citation, etc.) is committing plagiarism. Maintain your integrity when completing assignments. To avoid plagiarism, summarize content and concepts in your own words, and cite all the sources you use! If you are unsure about what constitutes plagiarism ask the Instructor and TA, and they will help you. Students who plagiarize work may be subject to various disciplinary actions, including a failing grade on a particular assignment, failure of the entire course, and possible expulsion from the university. Please refer to the UIC Student Handbook (<https://dos.uic.edu/wp-content/uploads/sites/262/2019/01/FINAL-VERSION-2019.pdf>) and the Student Disciplinary Policy (https://dos.uic.edu/wp-content/uploads/sites/262/2020/01/DOS_Student-Disciplinary-Policy-2020.pdf) for specific rules regarding these matters./5wshgq

Respect for Copyright. Please protect the integrity of all course materials and content. By enrolling in this course, you agree to honor this request. Be mindful of the hard work and time that instructors and TAs put into creating course materials such as exam and quiz questions, worksheets, lecture videos, and reading materials. Please do not upload course materials not created by you onto third-party websites or share content with anyone who is not enrolled in our course. I am grateful for your cooperation in honoring this important request.

Electronics Use Policy. Please turn off your cell phone or set it to vibration during the online class. During class please mute your microphone until you are ready to talk and be respectful when others take their turn talking with their microphone. Loud noises, music or phone ringing during class are not respectful towards others. Students who disrupt class with improper behaviors or excessive use of electronic devices may lose 10 points on their final grade.

Course Schedule

Note: This course schedule may be revised. All revisions will be posted on Blackboard in a timely fashion.

Week	Day	Date	Topic	Chapters
1	T	1/12	Syllabus and Course Introduction <i>Discussion Forum: Introduce Yourself</i>	
	R	1/14	PART I: Foundations of Cognitive Neuroscience Introduction to Cognitive Neuroscience	Chapter 1
2	T	1/19	Principles of Brain Anatomy and Functions	Chapter 2
	R	1/21	Principles of Brain Anatomy and Functions	Chapter 2
3	T	1/26	Research Methods in Cognitive Neuroscience	Chapter 3
	R	1/28	Research Methods in Cognitive Neuroscience	Chapter 3
4	T	2/2	PART II: Core Brain Processes Hemispheric Specialization	Chapter 4
	R	2/4	Hemispheric Specialization <i>Class Research Demonstration #1 (for Essay 1)</i>	Chapter 4
5	T	2/9	EXAM 1 (Chapters: 1,2,3,4)	
	R	2/11	Sensation and Perception: Vision	Chapter 5

6	T	2/16	Sensation and Perception: Audition, Somato-sensation	Chapter 5
	R	2/18	<i>Action and Perception</i> RESEARCH ESSAY 1 due by midnight	Chapter 8 (selected topics)
7	T	2/23	<i>Object Recognition</i>	Chapter 6
	R	2/25	<i>Object Recognition</i>	Chapter 6
8	T	3/2	<i>Attention</i>	Chapter 7
	R	3/4	<i>Attention</i>	Chapter 7
9	T	3/9	EXAM 2 (Chapters:5, 6, 7, parts of 8)	
9	R	3/11	Memory Systems	Chapter 9
10	T	3/16	Memory Systems <i>Class Research Demonstration #2 (for Essay 2)</i>	Chapter 9
	R	3/18	Language	Chapter 11
	T - R	3/23 – 3/25	SPRINGBREAK	
11	T	3/30	Language	Chapter 11
	R	4/1	Emotions RESEARCH ESSAY 2 due by midnight	Chapter 10

12	T	4/6	Emotions	Chapter 10
	R	4/8	EXAM 3 (Chapters: 9,10, 11)	
13	T	4/13	PART III: Control Systems Cognitive Control and Executive Functions <i>Class research demonstration #3 (for optional Essay #3)</i>	Chapter 12
	R	4/15	Cognitive Control and Executive Functions	Chapter 12
14	T	4/20	Social Cognition	Chapter 13
	R	4/22	Social Cognition <i>Extra-credit Essay #3, due by midnight</i>	Chapter 13
15	T	4/27	Consciousness	Chapter 14
	R	4/29	Consciousness	Chapter 14
Finals Week	M	5/3*	FINAL EXAM, 10:30 am to 12:30 pm (Chapters 12, 13 ,14) *Note that the final exam is on a Monday at 10:30 am	

RESOURCES FOR STUDENTS

The **UIC Library** is located both on east and west campus, provides access to resources, study rooms, and research support both online via chat and in person. At Daley Library on the east side of campus, stop by the reference desk in the IDEA Commons, or make an appointment for research help on either side of campus. Learn more about library policies at

<http://library.uic.edu/>. To find research materials in specific subject areas view the Research Guides at <http://researchguides.uic.edu/>

The UIC Writing Center. The UIC Writing Center provides excellent online resources to help students with paper writing in general. In addition to working with us on specific written assignments, we strongly recommend that you take advantage of the UIC Writing Center resources, especially if writing has been a challenge for you in the past, or if you do not have a lot of experience with writing scientific papers. To learn more or set up an appointment: <https://writingcenter.uic.edu/>.

The Academic Center for Excellence (ACE) can help if you feel you need more individualized instruction in reading and/or writing, study skills, time management, etc. Please call (312) 413-0031 or visit <https://ace.uic.edu/> for more information.

The Math and Science Learning Center, located in the Science and Engineering South Building (SES) at 845 W. Taylor St. 3rd Floor, Room 247, is a meeting place for students in Math, Biological Sciences, Chemistry, Earth and Environmental Sciences, and Physics. At the MSLC, students can meet with graduate teaching assistants for tutoring in 100-level courses, arrange informal group study sessions with other students, or meet up with friends to attend one of the workshops, seminars, or other activities sponsored by the SLC during the semester. Visit the website at <https://mslc.uic.edu/>, call 312-355-4900, or email at mslc@uic.edu.

The UIC Wellness Center. The UIC Wellness Center (<https://wellnesscenter.uic.edu/resources-and-services/>) provides many useful resources on Wellness, and useful guidelines on how to manage and navigate your online classes: <https://wellnesscenter.uic.edu/news-stories/how-to-navigate-online-classes/>.

Counseling Resources for Students. Counseling Services are available for all UIC students. You may seek free and confidential services from the Counseling Center at www.counseling.uic.edu. The Counseling Center is located in the Student Services Building; you may contact them at (312) 996-3490 during normal business hours (M-F, 9 am - 5 pm). If calling after hours, press 2 to be connected to a crisis counselor. In addition to offering counseling services, the Counseling Center also operates the InTouch Crisis Hotline from 6:00 p.m.-10:30 p.m. They offer support and referrals to callers, as well as telephone crisis interventions; please call (312) 996-5535. Furthermore, the **Office of Applied Psychological Services (OAPS)** at UIC offers mental health

services based on a sliding scale, <https://psch.uic.edu/research-programs/clinical/office-of-applied-psychological-services/> .

The **Campus Advocacy Network** provides information and offers resources to all UIC students, faculty, and staff. Under the Title IX law you have the right to an education that is free from any form of gender-based violence and discrimination. Crimes of sexual assault, domestic violence, sexual harassment, and stalking are against the law and can be prevented. For more information or for confidential victim-services and advocacy, contact UIC's Campus Advocacy Network at 312-413-1025 or visit <http://can.uic.edu/>. To make a report to UIC's Title IX office, email TitleIX@uic.edu or call (312) 996-5657.

Campus Security. As a UIC student, you have chosen to live and study in one of the nation's largest cities. But, as at any university, crime is a reality. At UIC, we are strongly committed to our public safety programs, and we encourage students to be proactive in learning what programs and services are available in case of an emergency. You are DISCOURAGED from staying in university buildings alone, including lab rooms, after hours and are ENCOURAGED to use the POLICE/STUDENT patrol escort if you are uncomfortable traveling anywhere on campus. You may request an escort to accompany you to your campus destination on foot by calling (312)996-2830, and between 11:00 pm and 7:00 am you can dial the Red Car service (312)996-6800 if you are alone and need to leave the building. Through Red Car, the university has established a safe evening transportation service for university employees, students, visitors, and other authorized individuals. The car travels between university facilities within the following general boundaries: Clinton Street on the east; Western Avenue on the west; Jackson Boulevard on the north; and, 16th on the south. This service is available only to individuals possessing a valid UIC i-card. The i-card is required to ensure the safety of the driver and other passengers. Navigate to [Life at UIC](#) for more information. Also, you can download the UIC SAFE app, a free personal security tool for students, faculty, and staff. It allows you easy contact with dispatchers and first responders in case of emergency. Finally, by dialing 5-5555 from a campus phone, you can summon Police or Fire for any on-campus emergency. You may also set up the complete number, (312)355-5555, on speed-dial on your cell phone.