

INTRO TO COGNITIVE NEUROSCIENCE

Course Info

Course #: PSB 4342 (3 credits)

Location: Tuesdays: [ROL 205](#)
Thursdays: [ROL 205](#)

Times: Tuesdays: Periods 5-6 (11:45am –1:40pm)
Thursdays: Period 6 (12:50pm –1:40pm)

Canvas course website: <https://ufl.instructure.com/courses/514459>

Instructor Info

Instructor: Eliany Perez

Email: elianyperez@ufl.edu

Phone: 239-333-5807

Office Hours:

Wednesday, 9:30am-11:30am or by appointment (email me)

Zoom link: <https://ufl.zoom.us/j/97517939456>

Office location: PSY003

INTRODUCTION

Cognitive Neuroscience is the multidisciplinary endeavor to unravel how the brain supports behavior. We will unpack this field by concentrating on three themes – *levels of analysis*: neuroscientific and behavioral methods for understanding the brain; *conceptualizing cognition*: theoretical approaches to examining human thought; *building models*: evaluating the principles and computations that bridge neuroscience with cognition.

COURSE GOALS

By the end of this course, you will be able to:

1. Identify and describe the primary methods used to understand the human brain and its function. Identify functional and anatomical divisions of the human brain.
2. Describe specific functions and processes of human cognition and explain how the brain supports or achieves them.
3. Evaluate neuroscientific evidence – explain the methods; describe what was shown; determine how the data support a broader theory.
4. Develop an argument (written and oral) using primary scientific literature from several neuroscientific approaches as evidence, for how the brain accomplishes specific cognitive tasks.

SUCCESS IN THE COURSE

Cognitive neuroscience is a rapidly developing field with new data and insights coming all the time. Developing the ability to critically think about the material we are covering and how it inter-relates is the cornerstone of success. So, ask questions. Don't just attend class – participate; engage; bring your own insights.

QUESTIONS ABOUT THE COURSE?

1. Check the syllabus. (You're here! Good job!)
2. If the question is of general interest, or other students may be able to help you, post your question to the Canvas discussion board (Course Questions, pinned).
3. If your question is specific to you or about grades, either email [Eliany](#), come to her office hours, or email to set up an appointment.
4. If you have technological issues with Canvas, please use the [UF help desk](#) or (352) 392-HELP - select option 2.

MINIMUM TECHNOLOGY REQUIREMENTS

This course requires adherence UF's minimum technology requirements (recommendations [here](#)). These include a computer with webcam, microphone, speakers, and access to a stable internet connection.

TEXTBOOK AND READINGS (REQUIRED)

- **Cognitive Neuroscience.** Banich & Compton, 4th Edition (e-book / paperback / hardback all acceptable). ISBN-10: 1107158443.
- Additional readings will be posted on Canvas.

Note: A disproportionate amount of the early research in cognitive neuroscience was conducted by cisgender, heterosexual white men and later by white men and women. I have done my best to represent diverse authors, organizations, and topics, within the constraints of Cognitive Neuroscience, but I also acknowledge that there may be covert and overt bias in the material, and this limits our understanding of the concepts we will discuss. We will acknowledge this limitation throughout the course and do our best to bring in diverse thought.

PREREQUISITES KNOWLEDGE AND SKILLS

PSB 3340 Behavioral Neuroscience OR Instructor permission.

COURSE POLICIES

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found [here](#).

ATTENDANCE

Synchronous attendance is expected, and I will collect in-person attendance each class. You are allowed 2 unexcused absences throughout the course. Lectures will be recorded for your reference, and a Zoom option will be provided, though it should only be used when in-person attendance is impossible. If this option is abused, it will be removed.

Please do not attend in-person if you are feeling unwell. Any symptom, no matter how minor, warrants staying home.

EATING/DRINKING

For in-person attendance, eating and drinking in class is strictly prohibited.

QUIZ/EXAM DATES/POLICIES

Reading quizzes will be taken electronically on Canvas.

The midterm and final exam will be taken at home, open note, but will be timed. If you need accommodation, please speak with Eliany as soon as possible.

LATENESS AND MAKE-UP POLICY

Unexcused late assignments will receive 10% reductions per day off the total grade. (E.g., 1 hour late = 90% maximum grade; 1 day + 1 hour late = 80% maximum grade).

An assignment is considered late if it is submitted > 20 minutes past the deadline time. This grace period is provided for Canvas technical issues. If you cannot submit through Canvas, email the assignment to Eliany, then submit via Canvas.

Permission to make up assignments and tests will be granted for university approved reasons and must include documentation as per university guidelines. If you have a university-approved request, please submit it in writing (over Canvas or UF email) to Eliany in advance of the assignment/test.

COURSE EVALUATIONS

Help future students who take this class by filling out course evaluations online!

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/>.

GRADING

Calculation of grades will be based on the following percentages. Point values on tests and rubrics may vary, so follow the percentages laid out here. More information on grades and grade policies [here](#).

EVALUATION OF GRADES:

Reading quizzes (20%): Lowest score dropped

AI Assignment (15%)

Deep dives (15%)

Attendance (5%)

Exams (45%): 2 midterms, 1 cumulative take-home final (15% each),

GRADING SCALE:

Grades will be rounded to the nearest percentage point (.5+ rounds up to the nearest point).

B+	86-89	A	93+	A-	90-92
C+	76-79	B	83-85	B-	80-82
D+	66-69	C	73-75	C-	70-72
F	59 or less	D	63-65	D-	60-62

Example 1: Your grade is 85.4%. Does it round up to 86%? **NO**.

Example 2: Your grade is 85.6%. Does this round up to 86%? **YES**.

CLASS SCHEDULE

Unit	Topic	Date	Assignments	Quizzes
Chapter 1	Intro & The Nervous System	R – 8/22	Read syllabus	
		T – 8/27	Pre-class survey	Ch. 1 Quiz
Chapter 2	History	R – 8/29		
		T – 9/3		(No Quiz)
Chapter 3	Methods	R – 9/5		
		T – 9/10		Ch. 3 Quiz
AI	Artificial Intelligence	R – 9/12	AI & Neuroscience Reading	
		T – 9/17	AI Assignment Due	

Chapter 5	Sensation & Perception	R – 9/19		
		T – 9/24		Ch. 5 Quiz
	Review for Midterm 1	R – 9/26		
Chapters 1,2,3,5		T – 10/1	Midterm 1 (take home, timed)	
Chapter 7	Spatial Cognition	R – 10/3		
		T – 10/8		Ch. 7 Quiz
Chapter 8	Language	R – 10/10		
		T – 10/15		Ch.8 Quiz
Chapter 9	Memory	R – 10/17		
		T – 10/22		Ch. 9 Quiz
	Review for Midterm 2	R – 10/24		
Chapters 7, 8, 9		T – 10/29	Midterm 2 (take home, timed)	
Chapter 10	Attention	R – 10/31		
		T – 11/5		Ch. 10 Quiz
Chapter 11	Executive Function	R – 11/7		
		T – 11/12	Deep Dive Assignment Due	Ch. 11 Quiz
Chapter 12	Emotion	R – 11/14		
		T – 11/19		Ch. 12 Quiz
	CONFERENCE	R – 11/21	NO CLASS	
	THANKSGIVING BREAK	11/25-11/29	NO CLASS	
	Course Review	T – 12/3	Student Evals	
		T – 12/10	Cumulative Final (take home)	

GENERAL POLICIES / BOILERPLATE

ACADEMIC CONDUCT / CHEATING

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to

the highest standards of honesty and integrity by abiding by the Honor Code. On all work submitted for credit by students 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." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with Eliany.

Cheating is defined in the UF Handbook. If a student is caught cheating, the first offense will result in a zero for that exam and a record will be placed in a temporary file with the Office of Student Affairs. The second offense will result in an "E" for the course, and the student will go before the Honor Court.

CLASS DEMEANOR

These guidelines hold in class and online, in public chat and private message. A fundamental part of science, learning, and communication is healthy debate. In fact, one goal of this course is for you to be able to mount and defend an oral argument in class. I want you to challenge each other's ideas. What this means is, statements like "You're wrong – and here's why..." or "I disagree – I read that..." should be encouraged.

What this does not mean is that you have the right to challenge anyone in an inappropriate, emotional, or non-science related way. We will respect each other's ideas, communications styles, and right to learn and express ourselves. The expectations of this course (and actually everywhere in life) are that you maintain respectful discourse *at all times*. If you are not sure where the line is between scientific debate and personal attack, lean toward the side of restraint and ask Eliany about it later.

DISABILITIES

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. [See the "Get Started With the DRC" webpage on the Disability Resource Center site.](#) It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

SEXUAL HARRASSMENT

Sexual Harassment is not tolerated in this class, in the Department of Psychology, or at the University of Florida. Sexual harassment includes: the inappropriate introduction of sexual activities or comments in a situation where sex would otherwise be irrelevant. Sexual harassment is a form of sex

discrimination and a violation of state and federal laws as well as of the policies and regulations of the university. All UF employees and students must adhere to UF's sexual harassment policy. Please review this policy and contact a university official if you have any questions about it. As mandatory reporters, university employees (e.g., administrators, managers, supervisors, faculty, teaching assistants, staff) are required to report knowledge of sexual harassment to UF's Title IX coordinator. You can also complete a Sexual Harassment Complaint Form.

AI POLICY

In this course, you are permitted to use AI resources to support your learning and writing processes, but these tools should serve as aids rather than replacements for your own critical thinking and original work. While AI can assist in generating ideas, structuring content, or clarifying concepts, the final submission must be a product of your own understanding and analysis. It is essential to verify the accuracy of any content or citations provided by AI, as these are often prone to errors. Furthermore, you are responsible for personalizing AI-generated text to reflect your own voice and perspective. Submitting unmodified AI content as your own is considered plagiarism and violates academic integrity standards. If AI tools are utilized, you are encouraged to disclose their use in a brief note explaining how they were employed in your work. Ultimately, while AI can enhance your learning, it should not replace the fundamental process of engaging deeply with course material and developing your own insights.

MENTAL HEALTH AND STRESS

Diminished mental health, including significant stress, mood changes, excessive worry, or problems with eating and/or sleeping can interfere with academic performance. The source of symptoms might be related to your course work; if so, please speak with me. However, problems with relationships, family worries, loss, or others personal struggles can also contribute to decreased academic performance. The University of Florida provides cost-free mental health services through the Counseling and Wellness Center (CWC). Please seek help if you feel you need it.

FOOD, SHELTER, AND OTHER MATERIAL NEEDS

Any student who has difficulty accessing sufficient food to eat every day, or who lacks a safe and stable place to live, is urged to contact the Field and Fork Food Pantry or the Dean of Students Office for support. Furthermore, please notify me or one of your TAs if you are comfortable doing so. This will allow us to provide you with any resources we can.: Contact information for the Counseling and Wellness Center: 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

RESOURCES SUMMARY

This is a particularly challenging time. Students in need of support have access to a wide variety of resources on campus. Below are some of the resources available. If you need anything during the semester, please reach out to me and I will do my best to connect you with resources.

Health and Wellness

- *U Matter, We Care*: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.
- *Counseling and Wellness Center*: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.
- *Student Health Care Center*: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.
- *University Police Department*: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).
- *UF Health Shands Emergency Room / Trauma Center*: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.
- *GatorWell Health Promotion Services*: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the GatorWell website or call 352-273- 4450.

Academic Resources

- *E-learning technical support*: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.
- *Career Connections Center*: Reitz Union Suite 1300, 352-392- 1601. Career assistance and counseling services.
- *Library Support*: Various ways to receive assistance with respect to using the libraries or finding resources. Call 866-281-6309 or email ask@ufl.libanswers.com for more information.
- *Teaching Center*: 1317 Turlington Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- *Writing Studio*: Daytime (9:30am-3:30pm): 2215 Turlington Hall, 352-846-1138 | Evening (5:00pm-7:00pm): 1545 W University Avenue (Library West, Rm. 339). Help brainstorming, formatting, and writing papers.
- *Academic Complaints*: Office of the Ombuds; Visit the Complaint Portal webpage for more information.

- *Enrollment Management Complaints (Registrar, Financial Aid, Admissions)*: View the Student Complaint Procedure webpage for more information.

IN-CLASS RECORDING

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

VISUAL-AUDIO RECORDING STATEMENT

Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded.

If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared.

As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

The following technology privacy policies are available [here](#).

Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.