

# Psychology 300

## Mind and Brain: Introduction to Cognitive Neuroscience

Policies and Syllabus – Spring 2023

Tuesday, Thursday 9:30am-10:45am, Pacheco ILC #140

**Instructor:** Dr. Jean-Marc Fellous

Office Hours: Tu/Th 12:00-1pm – Psychology #517 or by appointment

Contact: (520) 626-2617, fellous@arizona.edu.

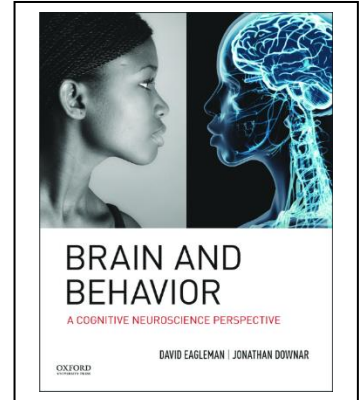
**Teaching Assistants:**

Lily Merritt ([lilymerritt@arizona.edu](mailto:lilymerritt@arizona.edu))

Office hours: Wednesdays 11am-1pm, Library A320 or by appointment

Ingrid Silva ([ikaisersilva@arizona.edu](mailto:ikaisersilva@arizona.edu))

Office hour: Mondays 4-5pm, Library B135 or by appointment



**Texts:**

- (required) Brain and Behavior: A Cognitive Neuroscience Perspective. Eagleman and Downar. Oxford University Press, 2016.
- (optional) Foundations of Behavioral Neuroscience. 9<sup>th</sup> edition. Carlson. Pearson publishing.

**Course Goals:**

How do you store a lifetime of memories, make decisions, and understand and generate language? What factors drive how you perceive the world and engage in a wide range of motor actions? What enables you to feel emotions and understand what others are thinking? The main objective of this course is to advance your knowledge of how the brain supports these cognitive abilities and others. Major topics will include sensation and perception, motor control, attention, learning and memory, language, executive functions and emotions. To cover these topics, you will be exposed to multiple methods for studying the brain, including a variety of brain imaging techniques as well as examination of individuals with brain disorders and brain damage.

**Grading Policy:**

There will be 3 midterms, one final and 6 or 7 in-class pop quizzes. The final is comprehensive. Midterm and final exams cover lecture material. Quizzes are given at random times and cover the material of the previous lecture. The final grade will be assigned as follows:

- **Quizzes**           **30 %**
- **Midterm 1 (20 %), Midterm 2 (20 %), Midterm 3 (20 %)**
- **Final**               **30 %**

**Notes:**

Students will be allowed to choose two of the 3 midterms (the third will not count toward the final grade. By default, the lowest of the 3 midterms will be dropped). **No make-up** (or early) quizzes and exams will be permitted. At the start of every lecture, up to 4 students will be allowed to sign-up to take notes. These notes will be posted online for all the students of the class to see and use. A one-time 10 points extra credit (equivalent to 1 quiz) will be given to volunteer note-takers. Additional extra credit points will be given for actively attending office hours (5 point per visit, maximum 15 points). All extra credits will be applied to the quiz total (i.e. maximum 60 or 70 points).

Re-grading requests should be made in writing to your TA. You must write a short justification, attach it to your quiz or exam, and turn it in to your TA *within 7 days* of the return of your test. Requests that do not follow these guidelines will not be considered. Because the material presented in class contains copyrighted material, **students will not be permitted to take pictures or movies** during class.

## Syllabus:

1	Th	Jan-12	Introduction
2	T	Jan-17	Anatomy and physiology of a neuron (Chapt 3).
	Th	Jan-19	Synapses and neural communication (Chapt 3).
3	T	Jan-24	Neuroanatomy: Cortex and Forebrain (Chapt 2).
	Th	Jan-26	Neuroanatomy: Midbrain, Hindbrain (Chapt 2).
4	T	Jan-31	Neuroplasticity (Chapt 4).
	Th	Feb-2	Methods in brain research (Chapt 1).
5	T	Feb-7	<b>Midterm 1 (cumulative, weeks 1,2,3,4).</b>
	Th	Feb-9	The visual system (Chapt 5).
6	T	Feb-14	The visual system (Chapt 5).
	Th	Feb-16	The auditory and vestibular systems (Chapt 6).
7	T	Feb-21	Other senses (Chapt 6).
	Th	Feb-23	The motor system (Chapt 7).
8	T	Feb-28	Attention and consciousness (Chapt 8).
	Th	March-2	Attention and consciousness (Chapt 8).
9	T	March-7	NO class
	Th	March-9	NO class
10	T	March-14	<b>Midterm 2 (cumulative, weeks 5,6,7,8).</b>
	Th	March-16	Memory (Chapt 9).
11	T	March-21	Memory (Chapt 9).
	Th	March-23	Sleep and biological clocks (Chapt 10).
12	T	March-28	Language (Chapt 11).
	Th	March-30	Decision Making (Chapt 12).
13	T	Apr-4	Decision Making (Chapt 12).
	Th	Apr-6	<b>Midterm 3 (cumulative, weeks 10,11,12,13).</b>
14	T	Apr-11	Emotions (Chapt 13).
	Th	Apr-13	Emotions (Chapt 13).
15	T	Apr-18	Motivation and Reward (Chapt 14).
	Th	Apr-20	Motivation and Reward (Chapt 14).
16	T	Apr-25	Social Cognition (Chapt 15).
	Th	Apr-27	Disorders (Chapt 16).
17	T	May-2	Disorders (Chapt 16).

**Tuesday May-9th 8:00-10:00am - Final (comprehensive).** No early/makeup final.

## **Attendance Policy**

Attendance records will not be collected but regular attendance of lectures is considered essential for satisfactory understanding of the material. All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion to the extent that they interfere with the ability to obtain the maximum grade in the class. The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>. The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, <http://policy.arizona.edu/human-resources/religious-accommodation-policy>. : Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: <https://deanofstudents.arizona.edu/absences>

## **Classroom Behavior and Classroom Policies Regarding Effective Learning:**

Students are expected to adhere to the Code of Academic Integrity. The policies related to such issues as cheating and plagiarism will be strictly enforced. Read the full Code at: <http://deanofstudents.arizona.edu/academicintegrity>

In addition, individuals in groups can learn best when all are considerate of each other. Therefore, we ask that you please make every effort to make the environment in the classroom conducive to effective learning. This includes such things as turning off your cell phone, only using your laptop for class related activities, refraining from conversation that is not geared toward the topic of the day, arriving on time, and leaving when class is finished. Read the full Student Code of Conduct at: <http://deanofstudents.arizona.edu/codeofacademicintegrity>

Because the material presented in class contains copyrighted material, **students will not be permitted to take pictures or movies** during class. On days when an exam is scheduled, students arriving late will not be permitted to take the exam if any other student in the class has read the exam and exited the room, or after 15 minutes late arrival, whichever comes first. On exam days, students cannot leave the room within the first 15 minutes of the exam (save for an emergency).

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

## **Students with Disabilities**

At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, <https://drc.arizona.edu/>) to establish reasonable accommodations.

Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let the instructor know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit <http://drc.arizona.edu>.

If you have reasonable accommodations, please plan to meet with the instructor by appointment or during office hours to discuss accommodations and how the course requirements and activities may impact your ability to fully participate.

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.

## **Student Code of Academic Integrity**

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.

The University Libraries have some excellent tips for avoiding plagiarism, available at <http://www.library.arizona.edu/help/tutorials/plagiarism/index.html>.

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted under any circumstances. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

Nondiscrimination and Anti-harassment policy: The University Policy 200E on prohibited behaviors can be found here: <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

## **Confidentiality of Student Records**

<http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa>

## **Career Connections**

1. **Career & Self Development** – This course will highlight different career pathways in Cognitive Neuroscience and Neuroscience. Students will learn about the research labs of current faculty members on campus.

2. **Communication** – Students will develop their communication skills by participating in group activities in class and turning in lecture notes for the class that will be posted online. Students will be encouraged (e.g. earn extra credits) to interact and communicate with the instructors during office hours.
3. **Equity & Inclusion** – Students will consider how social and personal biases have influenced neuroscience research and identify the benefits of becoming a more diverse and inclusive field

#### **What if you test positive for COVID:**

- Information about vaccines on campus can be found here: <https://health.arizona.edu/covidvaccine>
- If you test positive, please follow the student protocol in effect at our university: <https://health.arizona.edu/covidpositive>
- The CDC guidance for isolation can be found here:  
[https://www.cdc.gov/coronavirus/2019-ncov/your-health/quarantine-isolation.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fif-you-are-sick%2Fquarantine.html](https://www.cdc.gov/coronavirus/2019-ncov/your-health/quarantine-isolation.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fif-you-are-sick%2Fquarantine.html)

#### **Diversity, Equity, Inclusion and Mental Health Resources**

Diversity is essential. It unites and moves us forward. The diverse perspectives that students and teaching team members bring to this class are a resource, strengths, and benefits. Others may have a different perspective and will bring a new focus to an issue. It is important to learn from the information and ideas shared by other students. To learn more about the UA's commitment to diversity and inclusion visit [diversity.arizona.edu](http://diversity.arizona.edu)

Ideally science would be objective. However, as you will learn in this course, some of science is subjective and is historically built on a small subset of privileged voices. It is important to make note of this and think about how significant research findings may be biased by their nature of being carried out on a typically small, non-representative sample of human participants or animals.

Many resources are available to you, including:

Gender Pronouns: [lgbtq.arizona.edu/use-chosen-or-preferred-names](http://lgbtq.arizona.edu/use-chosen-or-preferred-names)

Land Acknowledgment: [nasa.arizona.edu](http://nasa.arizona.edu)

Commitment to Wellness: [health.arizona.edu](http://health.arizona.edu)

Student service members and veterans: [vets.arizona.edu](http://vets.arizona.edu)

Basic Needs Statement: [basicneeds.arizona.edu](http://basicneeds.arizona.edu)

#### **Subject to Change Statement**

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor. Changes to the syllabus will be posted on the class website.