

# Zuckerman Institute Neuroscience and Cognitive Science (ZINC) Undergraduate Lecture Series: Models of Mind, Brain, and Behavior

Department of Psychology – Columbia University  
PSYC1980 - Course Syllabus – Fall 2026

**Instructor:** Dr. Sarah DeMoya (she/her)    **Course Location:** JLG L5.084  
**E-mail:** [sed2182@columbia.edu](mailto:sed2182@columbia.edu)    **Course Meeting Time:** W\* 4:30 PM – 5:30 PM  
**Office Hours:** TBD    \*Class is held every other week  
**Office Hours Location:** 705 Uris    **Co-Instructor:** Dr. Daphna Shohamy

## Course Prerequisites:

Students should have already taken or be concurrently enrolled in either PSYC1001 or COGS1001.

## Course Role in the Department:

PSYC1980 is an introductory-level survey course, open to undergraduates and postbac students interested in cognitive science, neuroscience, and psychology. This course does not fulfill any major degree requirements, and is intended to be taken in the first or second year at Columbia.

## Supplemental Materials:

Various supplemental materials will be provided by the instructor on the course website.

## Course Website:

The most up-to-date information, including changes to the syllabus or to the class schedule, announcements, and additional materials are contained on the course website on CourseWorks (Canvas). Be sure you are familiar with it, that you are easily able to login to the website, and that you always have the lecture slides with you (whether printer or digital). If you have problems accessing the course website at any point during the semester, please let Dr. DeMoya know.

## Course Aim:

The aim of this course is to introduce students to the wide-ranging, cutting-edge research in cognitive science and neuroscience happening at Columbia's Zuckerman Institute (ZI). Students will learn how research labs investigate fundamental questions of the mind, brain, and behavior, and will learn about the model systems, tools, and methodological approaches used across these fields.

Lectures will focus on how different animal and other model systems are used in neuroscience and cognitive science research. Through this course, students will gain an

appreciation for the advantages and limitations of different model systems and why particular models are chosen to investigate specific aspects of mind, brain, and behavior.

Throughout the course, students will strengthen their ability to think like scientists, learning how research questions are formulated, how experiments are designed, and how scientific inquiry can be approached at multiple levels of analysis – from molecules to behavior – within the context of diverse model systems.

This course may also serve as a bridge to help students connect with faculty and the research labs at ZI, supporting future research involvement and mentorship opportunities.

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

- **Describe** major research questions currently being investigated in cognitive science and neuroscience at the Zuckerman Institute.
- **Compare** different model systems used to investigate research questions related to the mind, brain, and behavior.
- **Identify** pathways for engaging in research, including how to connect with faculty and research labs at the Zuckerman Institute.

### **Grades:**

This course will be graded Pass/Fail. Your overall course grade will be determined by your effort in the following areas:

- In-class participation: 50% (7 points over the semester)
- Written reflections: 50% (7 points over the semester)

Each class is worth 2 points (1 point for participation and 1 point for the end of class written reflection), for a total of 14 points over the semester.

### **Grade Assignment:**

Pass: 11-14 points (79% - 100%)

Fail: 0-10 points (0-78%)

### **In-Class Participation:**

Attendance and participation are required. Students who arrive after the sign in sheet has been passed around, who are talking during the lecture, who are using electronic devices during lecture, or who are otherwise not actively engaging will not receive credit for participation for that week.

### **Written Reflections:**

At the end of each lecture, students will hand-write a reflection summarizing the talk and their major takeaways. A guide for what to include in each weekly submission is on Courseworks. To get full credit, students must incorporate information presented in the talk. Reading the faculty member's recent publications and summarizing them is not sufficient to earn full credit. Reflections must be hand-written unless students have accommodations to type or audio record their reflection will be permitted to do so.

Students who attend the lecture but who leave early will not get credit for the written reflection for that week.

**Course Policies:** please read the following policies carefully!

**Disability Services:**

Students must register with their school's Disability Services office in order to receive disability-related accommodations. More information is available at:

**Columbia:** <https://health.columbia.edu/content/disability-services>

**Barnard:** <https://barnard.edu/disabilityservices/register-cards>

**Religious Observance:**

If you are going to miss class(es) due to religious observance, you must notify Dr. DeMoya during the first week of class so that accommodations can be made.

**Class Attendance and Electronics Policy:**

It is strongly encouraged that you take notes during class, as you will write a reflection at the end of each class on the faculty presentation. Unless you have documented accommodations through ODS or CARDS, you may not use any electronic device (phone, tablet, laptop, or any other device) during class. If you do have accommodations to use a device, please be respectful of your classmates, your instructor, and the presenter by only accessing the document for class and not using the device to message or access the internet. Phones must be silenced during class. **Attendance is required, including the first lecture on September 2<sup>nd</sup>.** If you need to miss class for any reason (death in the family, hospitalization, religious observance, etc.) it must be documented through a letter from your medical provider or direct email communication from your academic advisor to Dr. DeMoya.

**Late Assignments:**

Students will only receive credit for exit tickets submitted in person at the end of each week's lecture. Late assignments or electronically submitted assignments will not be accepted.

**Academic Honesty:**

Academic honesty is taken very seriously. Columbia students commit to the Honor Code as follows: "I affirm that I will not plagiarize, use unauthorized materials, or give or receive illegitimate help on assignments, papers, or examinations. I will also uphold equity and honesty in the evaluation of my work and the work of others. I do so to sustain a community built around this Code of Honor." All suspected cases of dishonest behavior will be reported to Student Conduct and Community Standards. All submissions will be run through TurnItIn.

**Sexual Respect:**

Any form of gender-based misconduct will not be tolerated. "Columbia University is committed to fostering an environment that is free from gender-based discrimination and

harassment, including sexual assault and all other forms of gender-based misconduct.” Visit this website for more information: <http://sexualrespect.columbia.edu/>

**Course Schedule:**

The calendar below details topics, readings, and assignments for each class period. Students should complete the assigned reading before coming to class.

<b>Date</b>	<b>Speaker</b>	<b>Topic</b>
September 9 <sup>th</sup>	Daphna Shohamy	Human models
September 23 <sup>rd</sup>	TBD	Rodent models
October 7 <sup>th</sup>	TBD	Fly models
October 21 <sup>st</sup>	TBD	Songbird models
November 4 <sup>th</sup>	TBD	Fish models
November 18 <sup>th</sup>	TBD	Cellular models
December 2 <sup>nd</sup>	TBD	Molecular models

**\*\*SUBJECT TO CHANGE\*\***

Any changes will be announced in lecture and posted as an announcement on CourseWorks.