# Fall 2026 – NEUR 8801 Syllabus
***Professional Development***

# I. COURSE OVERVIEW

**Lecture (1 credits):** T 8:25 – 9:15 am (in-person course delivery)
**Section:** C

## Course Description:

This course explores cutting-edge molecular and cellular technologies used to study the nervous system. Each week, students will read and critically discuss a recent research paper that highlights a specific neurotechnology—ranging from optogenetics and chemogenetics to RNA-based tools and more. The course emphasizes understanding how these techniques work, what questions they enable, and their limitations. Two sessions during the semester will be dedicated to creative experimental design challenges, allowing students to apply what they've learned in a collaborative and imaginative setting. This course is ideal for students interested in the evolving toolkit of neuroscience and how technology drives discovery. **PreReq:** *None*

## Course Goals / Learning Outcomes –

Together in this course we will learn to:

- Describe the principles and mechanisms behind key molecular and cellular neurotechnologies.
- Assess the strengths, limitations, and applications of specific neurotechnologies across experimental contexts.
- Collaborate in the design of hypothetical experiments, creatively integrating appropriate neurotechnologies to address a biological question.

## Textbook/Materials:

All course assignments, readings, and grades will be posted/submitted via Canvas. ***You will need to bring some sort of electronic device with access to the internet, paper, and a pencil to class each day.***

# II. COURSE GRADING

| CATEGORY | ASSIGNMENT | POINTS |
|---|---|---|
| **Perusall Readings** (20%) | **Comment on and discuss weekly readings in Perusall** | **200 pts** |
| **Experimental Design** (30%) | **Participate in 2 Mock Experimental Design Days** | **300 pts** |
| **Engagement** (20%) | **Attend and actively engage in course discussion/activities** | **200 pts** |

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|---|---|---|
| **Homework (30%)** | **Short Weekly Practice Questions** | **300 pts** |

## Grading Scale:

Your final grade will be assigned as a letter grade according to the following scale:

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|---|---|---|
| A | 90 – 100 % | 900.0+ pts |
| B | 80 – 89.99 % | 800.0 – 899.9 pts |
| C | 70 – 79.99 % | 700.0 – 799.9 pts |
| D | 60 – 69.99 % | 600.0 – 699.9 pts |
| F | 0 – 59.99 % | < 600.0 pts |

# III. COURSE EXPECTATIONS & GUIDELINES

## Academic Honesty/Integrity

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic honor code: https://policylibrary.gatech.edu/student-life/academic-honor-code

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## Accommodations for Students with Disabilities:

If you are a student with learning needs that require special accommodations, contact the Office of Disability Services (http://disabilityservices.gatech.edu) as soon as possible to make an appointment to discuss your needs and to obtain an accommodations letter. After you have received your accommodation letter you are welcome to email me to set up a private appointment to discuss how I can best implement these accommodations within the course.

## Statement About Acceptable Student Conduct

To support mutual respect and understanding between students and faculty, Georgia Tech faculty and students collectively adopted a list of student-faculty expectations. See the full Student-Faculty Expectations agreement here: https://catalog.gatech.edu/rules/22/

## Extensions & Late Assignments:

All assignments are due at **11:59 p.m. on Canvas** and are considered late at 12:00 a.m. Assignments will have a 10% late penalty applied for each 24 hours that it is late. In general, all due dates are final without prior instructor approval. However, I'm happy to be flexible and work with you if there are extenuating circumstances.

## Attendance

Please do not feel pressured to attend class in person if you experience any symptoms of any illness. Your health is personal, and you do not need to inform your instructor about missing class unless you will be missing more than 1 class days in total OR Experimental Design

Challenge Days. Missing more than 1 days of regular class day or any Mock Challenge Day will require additional documentation (ex: Dean of Students' note). Challenges missed without prior approval and subsequent documentation will receive a zero unless there are extreme extenuating circumstances. The format of the makeup may differ in style and delivery from the original version.

It is the student's responsibility to schedule makeup for the missed challenge day within 7 days of the original (unless they need additional time per the Dean of Student's note). It is also the student's responsibility to make up all material covered in their absence and/or attend office hours to learn the materials that were missed. Note: Zoom recordings will not be available.

### Modified Campus Operations / Digital Learning Days:

In the event of incremental weather or other reasons for campus shutdown, students should expect to move to a virtual class session at the regularly scheduled class time, unless otherwise specified via Canvas Announcement. Depending on the day(s) that campus is closed we may choose to hold class via Zoom or assign an alternative assignment for students to work on (replacing in-class discussion).

## V. RESOURCES

### Campus Resources:

Georgia Tech offers a wide range of campus resources to help students academically and personally. Click here for a list of relevant resources.

### Help With Writing/Presentations:

- The CommLab

### When in Doubt Contact:

The Dean of Students Office can connect you with specific resources if you are still unsure of where to go for help. The request assistance form is helpful for sharing documentation from Stamps with your professors among other things.