

**Fall 2026 – NEUR 2000 Syllabus**  
***Principles of Neuroscience for Non-Majors (3 credits)***

## **I. COURSE OVERVIEW**

**Lecture:**

**Section A:** F 11:00 AM-12:15 PM, Boggs 1-44

**Recitation:**

**Section A:** W 5:00-5:50 PM, CULC 123

**Instructor:**

<b>Instructor</b>	<b>Email</b>
Matthew Nusnbaum, PhD (he/him)	<a href="mailto:mnusnbaum3@gatech.edu">mnusnbaum3@gatech.edu</a>

**Email Dr. Nusnbaum for:** accommodations, extended absences, requesting makeup exams, course issues, minor and career advising

**Email your assigned TA for:** Canvas or Assignment issues; reviewing notes when absent, arranging approved makeup exams, peer advising, etc.

**Course Description:**

This blended course provides students with an introduction to topics in neuroscience which will serve as a foundation for upper-level neuroscience courses as well as applications to their primary field(s) of study. Students will learn neuroscience from a cellular/molecular, systems, and behavioral perspective. The recitation component will allow students extra opportunities to reflect on the content, ask questions of TAs and practice answering test-style questions, enhancing understanding of topics discussed in lecture. Pre- &/or Co-Requisites: BIOS 1107 and PSYC 1101

**Course Goals / Learning Outcomes –**

Upon completion of this course, students will be able to:

- Identify and describe the key terminology, concepts, and principles of neuroscience
- Interpret output responses to given input responses using cellular/molecular; systems/computational; and cognitive/behavioral principles of neuroscience
- Analyze graphical representation of neuroscientific data and illustrate key neuroscientific concepts using figures
- Apply knowledge of neuroscientific mechanisms to observe and or manipulate neural output responses
- Formulate and test hypotheses using neuroscientific methodologies and techniques

**Course Delivery:**

Significant content delivery and review components will involve asynchronous and online work, primarily delivered via Canvas. All activities will take place in-person. This format is to simultaneously provide flexibility for students to work through course content while promoting student engagement and access to instructors. As activities will involve active learning and participation by students, session recordings will not be possible, and it is not possible to make up missed days. Excused absences will be addressed below.

### Textbook/Materials:

- Neuroscience: Exploring the Brain, 4Ed., [Mark F. Bear](#) et al.
- Point Solutions clicker software for mobile device
- Please bring paper and writing utensil to class

All course assignments, readings, and grades will be posted and submitted via Canvas.

## II. COURSE REQUIREMENTS & GRADING

Assignment	Date (subject to change)	Points
Unit Exams 1, 2, & 3	Sept 18 <sup>th</sup> , Oct 23 <sup>rd</sup> , Nov 20 <sup>th</sup>	450
Final Exam	Dec 4 <sup>th</sup> 8:00 AM - 10:50 AM	200
Unit Integrated Questions	Due before each Unit Exam	60
Engagement: Homework, In-class activities	See Canvas assignments	160
Quizzes (Pre-, Post-, and Practice Quizzes)	See Canvas assignments	30

### Grading Scale:

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

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Listed [below](#) are several grade repair opportunities. There will be no additional allowances for grade repair. **Do not ask your instructor or TA for additional points or “grade rounding”!**

### Grade Repair Opportunities:

To be fair to all students, extra credit must be offered to the entire class and cannot be offered to an individual student. Instructors and TAs **will not respond to inquiries for “grade adjustments”** at the end of the semester.

**Exams 1 – 3 Grade Repair (for the short answer section only):** You may earn up to ½ of the lost points from the free response section by providing the correct answer(s) and the reason for why the answer you provided was incorrect.

**Course Feedback:** Provides an opportunity to add an extra 1% to the overall final semester grade if 80% of students do the final CIOS.

### III. DESCRIPTION OF GRADED COMPONENTS

#### **Exams (150 points each x 3 Unit Exams = 450 points; Final = 200 points):**

Exams will consist of both multiple choice and short answer questions. While exams 1-3 are not considered to be cumulative, material assessed on each exam does require an understanding of the material presented in the previous unit(s).

Format: All exams are in-person via Canvas during the assigned class period with HonorLock enabled.

- Crib Sheet: You will be permitted a “3”x 5” **index card supplied by instructor for a handwritten, front and back crib sheet**; however, there will be a time limit, so it is to your advantage to study for these exams as if they were closed book/notes. All figures and tables must also be handwritten, as the act of re-creating these images can aid with retention. Students must work independently and any evidence of students working together or consulting outside sources in such a manner will be considered unauthorized collaboration as per the Georgia Tech honor policy.

#### **Integrated Unit Exam Question (20 points each x 3 = 60 points):**

Each exam unit you will prepare an essay that integrates your knowledge of neural processes and demonstrates your learning over the course of that unit.

You will be tasked with designing a computer simulation to model the neural mechanisms of an alien species recently discovered by scientists. This species exhibits unique behaviors, such as instantaneous communication across vast distances, rapid learning of complex tasks, and exceptional sensory abilities beyond human capacity. For each of the three units covered in this course, you will describe five (5) key neural concepts or processes that you would include in the simulation to explain and replicate these behaviors. (1 point for each concept/process). Details for each assignment will be given during that unit and posted to Canvas.

#### **Engagement: Homework Assignments:**

Will include reviewing videos, answering questions and prompts, engagement within the Piazza platform and other assessments to ensure students are prepared for the in-class activities and making progress toward exam preparation.

#### **Interactive Impact Day Activities:**

Each week the class will meet to extend learning from the online components of the course. These are problem-based learning activities or additional assignments designed to provide opportunities to practice critical thinking skills on major concepts covered in the current unit.

The goal is to encourage engagement, creativity, and deeper understanding of the subject matter by providing a variety of approaches to meeting the course objectives.

**Interactive Impact Day Activities (up to 90 points).** In our blended course design, we use our class periods to enhance engagement. Interactive Impact Day Activities are dynamic, in-class learning experiences designed to engage students in applying course concepts to real-world scenarios and to give students additional practice with neuroscience skills. These activities are structured to encourage collaboration, critical thinking, and hands-on problem-solving. During

an Interactive Impact Day, students might work in small groups on case studies, simulations, other exercises that require them to analyze situations, make decisions, and assess the impact of their choices. The activities are meant to deepen understanding by moving beyond theory and allowing students to see how concepts function in practice. All in-class activities conducted on each day are due at the end of each class period for submission into Canvas.

They cannot be made up. There will be a total of 10 in-person Interactive Impact Days sessions, each worth 10 points. The maximum point value for this assignment category is 90 points, so that missing one session will have no negative impact on a student's final grade. No excused absence documentation is required for a single absence. If a student anticipates missing more than one session, or has two excused absences in a semester, they **MUST** meet with the instructor to discuss the matter.

There will be additional "practice" quizzes on Canvas. These will be approximately 5 – 10 questions designed to give practice with the type of questions that will be on the exams. These quizzes will be posted on Canvas and open for 1 week. These will be scored on completion (not correctness).

**\*There are no available past exams for practice.**

## IV. OPTIONAL RECITATION

There are optional recitations scheduled to provide students with additional opportunities for practice. Some of the activities in recitation will involve additional explanations, creating process diagrams, and working through questions similar to those on the exams.

- Wednesday - 5:00 – 5:50 pm in CULC 123

## V. COURSE EXPECTATIONS, POLICIES, & GUIDELINES

### **Extensions, Late Assignments, Re-Scheduled/Missed Exams:**

Any assignments submitted after the posted deadline will be subject to a 10% grade reduction for every 24 hours it is late. No assignments will be accepted more than 5 days late. In-class assignments **may not** be submitted late.

Rescheduling an exam must be done in advance and receive approval from the instructor. An exam missed without prior approval will receive a zero.

### **Grade Disputes:**

Any assignment grade disputes must be made within **7 days** of the grade posting. Request for assignment review beyond this window will not be granted.

### **Accommodations for Students with Disabilities:**

If you are a student with learning needs that require special accommodations, contact the Office of Disability Services at (404) 894-2563 or <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 accommodations letter you are welcome to email Dr. Nusnbaum to set up a private appointment to discuss how we can best implement these accommodations within the course.

It is highly recommended to schedule all exams with the testing center.

### **Re-grading and Correcting Grade Errors**

If the grade in the gradebook/Canvas is incorrectly entered due to human error (ex: you got a 95 on the returned assignment but a 93 is written in the grade book), please let your assigned TA know immediately. It will be swiftly corrected, with our apology. If you believe the grade you received for an assignment is incorrect and wish for the instructor to re-grade or review the grade a second time you must make this request no later than 7 days from the date the grade was given.

### **Academic Integrity, Collaboration, Group Work, & AI:**

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit <http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Any in-class group activities will require one submission per group.

Use of AI (ChatGPT and similar tools): This course values independent thinking, critical analysis, and genuine effort in your coursework. Assignments are intended to foster intellectual growth and strengthen essential skills. The use of digital tools and online resources to supplement your study is encouraged.

But, the objective of assessments is to gauge your understanding and application of the course material, not to rely on automated responses. Your engagement with the course materials, active participation in discussions, and independent work are fundamental aspects of the learning process.

Submissions found to be generated or heavily influenced by AI tools will be considered a breach of academic integrity and will be addressed according to the institute's policies on academic misconduct. Approach assignments as opportunities for personal growth and learning. If you require clarification or assistance, please reach out for guidance.

### **We Respect Diversity**

It is our intent that students from all backgrounds (gender, sexuality, religion, disability, age, socioeconomic status, ethnicity, race, and culture) will have an equal opportunity for a supportive learning environment in this course. We appreciate that the diversity our students bring to this class enhances our discussions and understanding of neuroscience. To this end, it is our intent to employ teaching materials and learning activities that are respectful of the diversity present within our student population. We encourage you to reach out to us for constructive conversation on how we may improve the course within the scope of diversity issues we may unknowingly neglect. Additionally, if you have a religious event during scheduled class, let us know via email at least 3 days prior so that we can make the appropriate arrangements for you.

## **Student-Faculty Expectations Agreement**

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

## **Email and Piazza Policy**

We encourage all questions about course content to be submitted to Piazza. Posting here allows other students who have similar questions to also contribute and learn the answer so that learning can be collaborative. Email your Instructor or your assigned TA if you have an issue with Canvas or Perusall or questions that are beyond the scope of the course content or explicitly personal (e.g., absences). We are here to help!

## **Campus Resources:**

Georgia Tech offers a wide variety of campus resources to help students succeed both academically and personally. These include, but are not limited to, the library, The Communication Center, The Center for Academic Success, The Counseling Center and The Division of Student Life, or Women's Resource Center. Click [here](#) for a list of relevant campus resources available to all Georgia Tech students.

## VI. ADDITIONAL ACCOMODATIONS & RESOURCES

### **Supplemental Materials:**

**Additional textbooks that may be beneficial:** Principles of Neuroscience, 5Ed., Kandell, Schwartz, Jessell, Siegelbaum, Hudspeth

The list below presents a few online resources to assist in your understanding of the topics presented:

- <http://www.brainfacts.org/>
- <http://brainu.org/movies>
- <https://www.ted.com/playlists/browse?topics=neuroscience>
- <https://www.khanacademy.org/test-prep/mcat/organ-systems>
- <https://nba.uth.tmc.edu/neuroscience/index.htm>

### **Student Drop-in Hours**

Every student can improve their skills, learn from their mistakes, and be successful in this course. Attending office hours is one strategy that students can utilize to do this. We recommend that all students attend drop-in hours as they feel are needed, regardless of performance (even if you are doing well, you are more than welcome to meet with us as there are always areas to improve!).

### **Relevant Campus Resources**

#### **Study Resources:**

- [Peer Led Undergraduate Study \(PLUS\)](#)
- [Help-Desks](#) for 3C's (Calculus, CS, & Chem) and Physics
- [Office of Minority Educational Development](#)
- [Learning Assistance Program](#) in First Year Learning Centers located in the residence halls
- [1-to-1 tutoring](#) through the Center for Academic Success supports more upper division courses

#### **Help With Writing/Presentations:**

- The [CommLab](#)

#### **Help with time management/test prep/etc.**

- The Center for Academic Success offers [on-demand workshops](#)
- [Academic Coaching](#) to work with you individually to discuss goals AND formulate strategies to reach them to improve academic skills, motivation, and confidence.

#### **Career/Interview Help:**

- The [Center for Career Discovery and Development](#)
- The [pre-graduate and pre-professional](#) advising group

#### **Disabilities/Accommodations:**

- The [Office of Disability Services](#)

### **Physical/Mental Health:**

- The [Center for Assessment, Referral, and Education](#) CARE is your primary resource for mental health support, and they can refer you to appropriate resources which can include:
  - [Health Initiatives](#) for issues regarding self-care, stress management, thriving, and resilience
  - The [Counseling Center](#) for a variety of services, including group, couples, and individual counselling, workshops, psychoeducational screens, and crisis intervention
  - [Stamps Psychiatry Clinic](#) for psychiatric evaluations and medication management
- The [Stamps Health Services](#) provides primary care, pharmacy, women's health, immunization, and allergy shots.

### **Other Assistance:**

- The [Students' Temporary Assistance and Resources \(STAR\)](#) can assist with food, housing, interview clothing needs, and even interest-free emergency loans.
- [OMED](#) for underrepresented racial and ethnic groups on campus
- [Women's Resource Center](#) for women on campus
- [LGBTQIA Resource Center](#) for LGBTQIA students on campus
- [Veterans Resource Center](#) for veterans, military, reservist, guard members, and dependents on campus

### **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.