

Cellular Neuroscience Spring 2025: NEUR 327_002/BENG327_001

M/W 10:30am – 11:45am

Instructor: Patricia Sinclair

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Office: Krasnow 217

Classroom: Horizon Hall 1008

Office Hours: Tuesdays 10am – 12pm, or by appointment

Course Overview

The object of this core neuroscience course is to introduce basic concepts of cellular and molecular level neuroscience, including neuronal functions, cellular anatomy, cell membrane functions, electrical properties of neurons, and cellular basis of plasticity. Some neuropharmacology will be covered where these drugs are used to elucidate neural cell and circuit function.

Presentation Mode

This class will be delivered *in-person* with NO REMOTE option. The learning management system (LMS) for the course is **Canvas** which will allow access to class information including the syllabus and lecture presentations. However, this is NOT a hybrid or online course and presence in the classroom is required to maximize success.

Textbook

Neuroscience, Purves et al., 7th Edition, Sinauer Associates, Inc. Any format is fine (hardcover, paperback, looseleaf, or ebook).

Communication

1. We are using the Canvas (lms.gmu.edu) learning management system. Use your Mason credentials to log in and navigate to this class (NEUR327_002/BENG327_001).
2. Lecture slides will be posted to Canvas after class. Unfortunately, missed discussions and activities cannot be posted on Canvas but will be included on exams and quizzes, therefore class attendance is paramount to your success.
3. I will use Canvas to communicate about the course and *you are responsible for checking announcements*. If you need assistance with Canvas settings please reach out for more guidance or resources on navigating Canvas. Not checking announcements will not be an accepted excuse for missing an assignment or exam.

Late and Make-up Work

Quizzes and participation (in-class activities) *cannot* be made-up. Missed quizzes will receive a “0.” The lowest quiz grade will be dropped. Make-up exams will be allowed in case of emergency or illness **ONLY** and will require documentation *prior* to the missed exam. Please submit a request **BEFORE** the exam (i.e., on or before the morning of the exam). Participation activities during class are essential to your learning experience and will be missed and recorded as a “0” if not present. Missed assignments will incur a deduction of 10% of the earned grade per day missed. This is programmed into Canvas and calculated automatically.

Grades*

Final grades will be calculated based on exams (2 midterms, 1 final), a presentation, quizzes (8), and assignments.

Percent	Letter	Percent	Letter	Percent	Letter
98+	A+	92-97.9	A	90-91.9	A-
88-89.9	B+	82-87.9	B	80-81.9	B-
78-79.9	C+	72-77.9	C	70-71.9	C-
68-69.0	D+	62-67.9	D	60-61.9	D-
< 60	F				

Exams (70%)

There will be 2 mid-term exams worth **20%** of the final grade each plus a final exam which will be worth **30%**. The final exam will be cumulative. **No make-up exams will be allowed unless written medical documentation is presented in advance of the exam.**

Quizzes (10%)

There will be ~eight 10-point chapter quizzes that will account for 5% of the final grade. These will be announced in class and will be given at the start of class on the next meeting date. The single lowest quiz grade will be dropped.

Assignments and Participation (5%)

There will be assignments to either be completed in class (participation) or as homework. Assignments will be graded for completion and subject to point deduction as described in "Late and Make-up Work." **No make-up** will be given for missed participation.

Presentation (15%)

A group presentation will be given based on a primary research article to be chosen by your group and approved by the instructor. The article must be a *primary research* article from a peer reviewed journal on a topic relevant to the concepts covered in *this* class. The final presentation will be *no more than 25 minutes*. Each person will be awarded a score that will be a combination of an individual score (peer review, delivery) and a group score (content, organization, cohesive presentation). More detailed guidelines will follow.

**Rounding up will be considered upon student request at the end of the semester if the final grade is less than 0.5% from the next letter grade. Granting an increase will be influenced by qualitative aspects of the student's performance in including but not limited to attention during attendance, contribution to class discussions, and attitude.*

Course Schedule**

Week	Dates	Monday	Wednesday
1	January 22	NO CLASS	Review syllabus
2	January 27, 29	Chapter 1	No Class
3	February 3, 5	Chapter 2	Chapter 2
4	February 10, 12	Chapter 3	Chapter 3
5	February 17, 19	Exam 1 Review	Exam 1 (1-3)
6	February 24, 26	Chapter 4	Chapter 4
7	March 3, 5	Chapter 5	Chapter 5
8	March 10, 12 (SPRING BREAK)	NO CLASS	NO CLASS
9	March 17, 19	Chapter 5	Chapter 6
10	March 24, 26	Chapter 6	Chapter 6
11	March 31, April 2	Exam 2 Review	Exam 2 (4-6)
12	April 7, 9	<i>All presentations due</i> Presentations 1 & 2	Presentations 3 & 4
13	April 14, 16	Presentations 5 & 6	Presentations 7 & 8
14	April 21, 23	Chapter 7	Chapter 7
15	April 28, 30	Chapter 8	Chapter 8
16	May 5, 7	Final Review (LAST DAY OF CLASS)	FINAL EXAM (10:30 – 1:15)

**** This course schedule is subject to change at any time. Students are responsible for all announcements and syllabus modifications posted to Canvas. Check your Mason email and Canvas announcements daily**

Academic Standards

Academic Standards exist to promote authentic scholarship, support the institution's goal of maintaining high standards of academic excellence, and encourage continued ethical behavior of faculty and students to cultivate an educational community which values integrity and produces graduates who carry this commitment forward into professional practice.

As members of the George Mason University community, we are committed to fostering an environment of trust, respect, and scholarly excellence. Our academic standards are the foundation of this commitment, guiding our behavior and interactions within this academic community. The practices for implementing these standards adapt to modern practices, disciplinary contexts, and technological advancements. Our standards are embodied in our courses, policies, and scholarship, and are upheld in the following principles:

- **Honesty:** Providing accurate information in all academic endeavors, including communications, assignments, and examinations.
- **Acknowledgement:** Giving proper credit for all contributions to one's work. This involves the use of accurate citations and references for any ideas, words, or materials created by others in the style appropriate to the discipline. It also includes acknowledging shared authorship in group projects, co-authored pieces, and project reports.
- **Uniqueness of Work:** Ensuring that all submitted work is the result of one's own effort and is original, including free from self-plagiarism. This principle extends to written assignments, code, presentations, exams, and all other forms of academic work.

Violations of these standards—including but not limited to plagiarism, fabrication, and cheating—are taken seriously and will be addressed in accordance with university policies. The process for reporting, investigating, and adjudicating violations is [outlined in the university's procedures](#). Consequences of violations may include academic sanctions, disciplinary actions, and other measures necessary to uphold the integrity of our academic community.

The principles outlined in these academic standards reflect our collective commitment to upholding the highest standards of honesty, acknowledgement, and uniqueness of work. By adhering to these principles, we ensure the continued excellence and integrity of George Mason University's academic community.

Student responsibility

Students are responsible for understanding how these general expectations regarding academic standards apply to each course, assignment, or exam they participate in; students should ask their instructor for clarification on any aspect that is not clear to them.

Accommodations for Students with Disabilities

Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit <https://ds.gmu.edu/> for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu. Phone: (703) 993-2474.

Student responsibility

Students are responsible for registering with Disability Services and communicating about their approved accommodations with their instructor *in advance* of any relevant class meeting, assignment, or exam.

FERPA and use of GMU email addresses for course communication

The [Family Educational Rights and Privacy Act \(FERPA\)](#) governs the disclosure of [education records for eligible students](#) and is an essential aspect of any course. **Students must use their GMU email account** to receive important University information, including communications related to this class. Instructors will not respond to messages sent from or send messages regarding course content to a non-GMU email address.

Student responsibility

Students are responsible for checking their GMU email regularly for course-related information, and/or ensuring that GMU email messages are forwarded to an account they do check.

Title IX resources and required reporting

As a part of George Mason University's commitment to providing a safe and nondiscriminatory learning, living, and working environments for all members of the University community, the University does not discriminate on the basis of sex or gender in any of its education or employment programs and activities. Accordingly, **all non-confidential employees, including your faculty member, have a legal requirement to report to the Title IX Coordinator, all relevant details obtained directly or indirectly about any incident of Prohibited Conduct** (such as sexual harassment, sexual assault, gender-based stalking, dating/domestic violence). Upon notifying the Title IX Coordinator of possible Prohibited Conduct, the Title IX Coordinator will assess the report and determine if outreach is required. If outreach is required, the individual the report is about (the "Complainant") will receive a communication, likely in the form of an email, offering that person the option to meet with a representative of the Title IX office.

For more information about non-confidential employees, resources, and Prohibited Conduct, please see [University Policy 1202: Sexual and Gender-Based Misconduct and Other Forms of Interpersonal Violence](#). Questions regarding Title IX can be directed to the Title IX Coordinator via email to TitleIX@gmu.edu, by phone at 703-993-8730, or in person on the Fairfax campus in Aquia 373.

Student opportunity

If you prefer to speak to someone *confidentially*, please contact one of Mason's confidential employees in Student Support and Advocacy ([SSAC](#)), Counseling and Psychological Services ([CAPS](#)), Student Health Services ([SHS](#)), and/or the [Office of the University Ombudsperson](#).

Student Services

- Learning services (learningservices.gmu.edu)
- University Libraries (library.gmu.edu)
- Writing Center (writingcenter.gmu.edu)
- Counseling and Psychological Services (caps.gmu.edu)
- See [a longer list of Mason student support services posted on The Stearns Center website](#).

Add/Drop Deadlines

Deadlines for the Spring 2025 semester can be found on the [Mason Academic Calendar page](#).