

**NEUR 101_003:
Introduction to Neuroscience
Fall 2025**

Tuesday/Thursday 12:00pm-1:15pm

Classroom: Krasnow 229

Instructor: Patricia Sinclair, Ph.D.

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Office: Krasnow 207

Office/Student Hours: Wednesday 2pm – 4pm or by appointment. In person or by Zoom



By Professor Bill Harris from University of Cambridge

Course Overview

The nervous system controls everything we think, do, and feel. But how does it do this? And what happens when things go wrong? In this course, we will answer these questions by introducing the study of the nervous system (neuroscience). We will cover basic concepts in neuroscience such as neurons, action potentials, and synapses and examine their involvement in everyday life. We will explore what neuroscience has already uncovered about human development, aging, and disease. This course serves as an introduction to neuroscience for students of all majors.

Mason Core: Natural Science Overview, Non-lab

Lectures, activities, and assignments target these 4 learning outcomes specifically as they relate to the nervous system:

1. Understand how scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding:
 - a) evolves based on new evidence
 - b) differs from personal and cultural beliefs.
2. Recognize the scope and limits of science.
3. Recognize and articulate the relationship between the natural sciences and society and the application of science to societal challenges (e.g., health, conservation, sustainability, energy, natural disasters, etc.).
4. Evaluate scientific information (e.g., distinguish primary and secondary sources, assess credibility and validity of information)

Neuroscience content-specific learning goals are listed below.

1. Describe how the human nervous system is organized from development into adulthood.
2. Understand the key mechanisms of brain activity such as action potentials and brain waves.
3. Describe how the brain mediates our daily activities from sleep to eating to remembering.
4. Appreciate how the nervous system controls complex activities such as movement.
5. Understand the basis of key human brain diseases such as Alzheimer's and Parkinson's Disease.
6. Find and interpret various types of scientific literature, distinguish the quality of and relevance of sources.
7. Evaluate current ethical debates in neuroscience.
8. Describe how current technology is used to advance understanding in neuroscience.

Course Modality

This is an in-person course. All slides will be posted to Canvas. I will attempt to make these available before class, but any updates to the slides will be completed after class. I strongly suggest keeping up with the most updated versions in Canvas. Supportive material and additional content will be uploaded to Canvas. Quizzes, exams, and some activities will be conducted in-person but some assignments to be done as homework will be posted to Canvas.

Canvas

In addition to above mentioned content, all grades will be posted in Canvas. Any changes to the course schedule will be communicated through Canvas Announcements and posted within Canvas. You must keep up with all announcements! Check your Canvas settings to ensure you are getting all announcements.

Grading and Assessment*

Quizzes (~11, drop 1 lowest)	10%
Assignments/Activities/Participation	15%
Neuro-Disorders Poster Project	15%
3 Exams: 2 midterms and 1 final	60% (20% each)
Total	100%

Grading Scheme

A+ 98 – 100%	B+ 88 – 89%	C+ 78 – 79.9%	D 60 – 69.9%
A 93 – 97.9%	B 83 – 87.9%	C 73 – 77.9%	F 0 – 59.9%
A- 90-92.9%	B- 80-82.9%	C- 70-72.9%	

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

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 (NEUR101_002). All email between instructor and student **MUST** be through the GMU email address or through Canvas.
2. 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.
3. Lecture slides will be posted to Canvas after class. Unfortunately, missed in-person discussions and activities will not be posted on Canvas. All material will appear on tests and quizzes, therefore class attendance is paramount to your success.

Course Help

Getting help is EASY! Please use office hours which are held every week as noted. If you cannot attend office hours, please contact me (psincla2@gmu.edu) for an alternative time. We can meet in person or by Zoom. Quizzes, assignments, and posted videos should be used as study tools for exams. Your project group is another source for help. I encourage group study and discussion to clarify and reinforce content. Once assigned to a group you may access the group homepage to communicate and arrange study/work sessions, share documents and resources, or to ask each other questions. I encourage anyone struggling to reach out ASAP to get assistance. I'm here to *facilitate* your success.

AI (Artificial Intelligence) Tools Policy:

In this course, students may use artificial intelligence (AI) tools, such as ChatGPT, Google Gemini, or others, to **support their learning**. For example, AI can be used to help in understanding complex concepts, make study guides, or quiz yourself on key terms. Unless otherwise explicitly instructed, AI tools are not allowed in completing graded assignments. This includes homework, exams, quizzes, and projects. Using AI on graded work without permission may be considered a violation of academic standards. This policy applies only to NEUR101_003. Other courses may have different rules. If you're ever unsure whether AI use is allowed for an assignment, please ask your instructor.

Quizzes (10%):

All quizzes will be given in person in the classroom unless otherwise instructed. These serve as a knowledge check and study tool. Any concepts covered by quiz questions are likely to be on the exams. The exam question may be exactly as presented on the quiz or some variation that covers the topic. You may drop the lowest quiz score, but no make-up quizzes are allowed.

Exams (20% each = 60%):

There will be 3 exams: 2 midterms and 1 cumulative final exam. Exams usually consist of about 70 questions formatted as multiple choice, fill-in-the-blank, matching, and short answer. No long essay questions will be on the exams as I strive to have them graded and posted within 48 hours. A make-up exam may be possible in case of a documentable emergency or illness IF the instructor is notified **PRIOR** to the exam.

Participation: Activities and Assignments (15%):

Activities and assignments will be graded based completion. While most in-class activities cannot be made up home activities or assignments that are turned in late will be reduced by 20% of the earned grade. 3 in-class participation will be dropped.

Poster Presentation (15%):

All students will work in group to research a neurodisorder and create a conference poster. Each group will present their poster in class. Each person will receive an individual grade made up of 2 major components: 1) a group score for the poster and 2) an individual score for personal professionalism during the collaborative creative process and the presentation. Each major component will be broken down further. We will have more information and discussions regarding this project as the semester progresses. The final poster will be uploaded to a Canvas link which will contain a comprehensive description of the project and expectations.

Academic Standards (University 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 [academic standards 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 the [Disability Services website](#) 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 environment 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](#).