**Neur 401 Advanced Neuroscience**

**Fall 2022**

**Instructor:** Dr. Tamara Stawicki

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**Class Meetings:** Tuesdays and Thursdays 9:00-10:45 am Acopian 306

**Office Hours:** Tuesday and Wednesday 1:00-2:00pm and by appointment

Office hours will be hybrid you can either come by my office or attend via zoom at the following link: [https://lafayette.zoom.us/j/98932259496?pwd=SXo5clpRTFNKT3BhNmNRc0hLUzY0UT09](https://www.google.com/url?q=https://lafayette.zoom.us/j/98932259496?pwd%3DSXo5clpRTFNKT3BhNmNRc0hLUzY0UT09&sa=D&source=calendar&ust=1662397371807489&usg=AOvVaw01AtZYtjGPFjwLLrjL4525)

which is also on the course moodle page.

If you cannot make my regularly scheduled office hours you can schedule a meeting with me at a different time here: <https://calendly.com/stawickt/meeting-with-dr-stawicki> you will have the option to select a zoom or in person meeting. This link will also be on the course moodle page. Please note I do not allow students to schedule meetings more than one week in advance.

**Course Website:** <https://moodle.lafayette.edu>

All assignments and readings will be posted on the course website. It is your responsibility to visit the website regularly.

Moodle privacy statement: Moodle contains student information that is protected by the Family Educational Right to Privacy Act (FERPA).  Disclosure to unauthorized parties violates federal privacy laws.  Courses using Moodle will make student information visible to other students in this class.  Please remember that this information is protected by these federal privacy laws and must not be shared with anyone outside the class.  Questions can be referred to the Registrar's Office.

**Course Description:**

This capstone course for the neuroscience major builds upon information covered in Neurobiology (Neur/Biol 256) and Physiological Psychology (Neur/Psyc 323). Through reading of the neuroscience literature, presentations, writing and discussion, we will explore in greater depth new and emerging topics in the field of neuroscience. We will also explore the different ways science can be communicated.

**Course Objectives:**

Through completing the assigned readings, assignments and class activities students will:

* Apply their learning, skills, and experience throughout their time at Lafayette to focused problems in neuroscience
* To promote critical and integrative thinking through discussion and writing
* To demonstrate science as a human endeavor and a process rather than a static collection of information
* To relate the discipline of neuroscience to real world applications and problems
* To develop organizational and communication skills necessary to convey scientific information to broad audiences including other researchers in the fields and to the general public
* To reinforce the neuroscience program as a community of colleagues and friends

**Course Learning Outcomes:**

At the end of this course, you will be able to:

* Read and critically analyze original source material in neuroscience thereby demonstrating a sophisticated understanding of neuroscience
* Communicate ideas in neuroscience through multiple means including informal discussion, writing, and the incorporation of visuals
* Capture information through the use of web-based search strategies and scholarly databases
* Disseminate scientific information to the general public
* Understand the practical application of research findings in neuroscience

**Class format:**

There will be four main class types throughout the semester: topic discussions, paper discussions, work sessions, and student presentations.

Topic Discussions: Students will be answering questions I’ve prepared and likely researching items in class then reporting back to the class as a whole. For some sessions I may give students prompts in advance and will expect them to come to class prepared to discuss them.

Paper Discussions:There will be 3-4 papers and articles (at least 2 of which will be primary scientific papers) that students will be assigned to read prior to class via perusall. We will then discuss these as a group during class. I will lead the first discussion and pairs of students will lead most subsequent discussions. Papers will be picked by whomever is leading the discussion.

Work Sessions: These class sessions will be dedicated to working on one of the assignments throughout the semester.

Student presentations: Students will be presenting the various assignments we’ll be working on throughout the semester.

**Attendance Policy:**

As a discussion based course, class attendance is a key part of the learning experience. As such students are expected to attend all class sessions in person. If you cannot attend a class session due to illness or a reasonable conflict it is your responsibility to notify me before class so we can come up with an alternative plan for you to earn participation credit for the missed class. A failure to do so will negatively impact your grade.

**Evaluation and Grading:**

Grades will be assessed by a combination of assignments and in class participation as outlined below.

Discussion and Participation (15%) Your discussion and participation grade will be determined by a combination of attendance, participation in perusalls for assigned readings prior to class, and **active** participation in class discussions and work sessions during class. It is expected that you will read all course materials prior to class so you can actively and meaningfully participate in in class discussions.

Leading Discussion (15%) Throughout the semester students will work together in pairs to present 3-4 papers/articles on a topic and lead a discussion of that topic. I will lead the first discussion to give students an idea of what is expected. You will be required to send me your papers/articles to be posted on perusall the week prior to the discussion you will lead. It will also be expected that you post at least 3 questions on perusall for your papers to help stimulate discussion. You will be presenting twice in the semester with your top grade from those 2 presentations being the one that will count towards your final grade.

Service-Learning Project (15%) Service learning is achieving course learning objectives while providing service to the community. In groups of ~4 you will be designing a short hands on lesson to teach 5th graders from Paxinosa Elementary school about an aspect of neuroscience. You will present an initial version of this lesson to your classmates and potentially the 5th grade instructor. You will then give the finalized lesson to the Paxinosa students and submit a reflection about your experience. You will receive both an individual and a group grade on this assignment.

Midterm Analysis Paper (15%) Near the middle of the semester you will be given a take home assignment that asks you to apply what you have learned so far in the class. This assignment will require you to critically analyze a paper and to integrate and synthesize the class readings and discussions to answer questions I pose. **It is expected that you will work on this paper individually**.

Debate (15%) A formal debate will be conducted based on a topic of our choosing. Students will work in groups of ~4 to develop an argument based on the assigned topic and position. Scientific articles will be selected by each team and distributed to the opposing team for evaluation and help in preparing the debate. You will receive both an individual and a group grade on this assignment.

Social Media Project (5%) You will develop content appropriate for social media, a meme, twitter thread, short video to relay a scientific idea. These will be presented to the class.

Final Project (15%) By the end of the semester we will have put together a final project relaying information about Neuroscience to a general audience. We will decide as a class what form we want this project to be in. Potential examples include a website, blog, or podcast. Each student will individually work on one topic to include in this. They will get feedback from me and their peers while working and will present the final product at the end of the semester.

Final Reflection (5%) At the end of the semester you will write a reflection on your time as a Neuroscience major at Lafayette.

Final grades will be determined by the following scale:

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| --- | --- | --- | --- |
| **Grade** | **Percentage** | **Grade** | **Percentage** |
| A | 93.0 to 100 | C | 73.0 to 76.9 |
| A- | 90.0 to 92.9 | C- | 70.0 to 72.9 |
| B+ | 87.0 to 89.9 | D+ | 67.0 to 69.9 |
| B | 83.0 to 86.9 | D | 63.0 to 66.9 |
| B- | 80.0 to 82.9 | D- | 60.0 to 62.9 |
| C+ | 77.0 to 79.9 | F | 0.0 to 59.9 |

**Please note that out of fairness for all students, final grades will not be bumped or rounded up or down.**

**The Importance of an Inclusive Classroom**

I would like to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.) To help accomplish this:

* If you have a name and/or set of pronouns that differ from those that appear in the class roster, please let me know. Additionally, please let me know if I am mispronouncing your name.
* If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. If you do not feel comfortable discussing the issue directly with me, I encourage you to seek out another, more comfortable avenue to address the issue. You may want to consider contacting your class dean (<https://advising.lafayette.edu/class-deans/>) or the counseling center (<https://counselingcenter.lafayette.edu/>).
* If any of our class meetings or assignments conflict with your religious events please let me know during the first two weeks of the semester so we can make arrangements for you.
* If you have suggestions to improve the effectiveness of the course for you personally or other students or student groups please let me know
* I (like many people) am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it.

**Resources for Student Support**

There are a number of resources available to support your learning at Lafayette. The following link (<https://citls.lafayette.edu/student-academic-support/>) provides information on available offices and programs for academic support. Additionally, the Counseling Center (<https://counselingcenter.lafayette.edu/>) is available to provide counseling and educational programs to help you achieve your academic, social and personal development goals.

**Disability statement:**

In compliance with Lafayette College policy and equal access laws, I am available to discuss appropriate academic accommodations that you may require as a student with a disability. Requests for academic accommodations need to be made during the first two weeks of the semester, except for unusual circumstances, so arrangements can be made. Students must register with the Office of the Dean of Advising and Co-Curricular Programs for disability verification and for determination of reasonable academic accommodations.

**Academic Honesty:**

Students are expected to adhere to the College’s standards of academic integrity as stated in the student handbook. The handbook states:

“To maintain the scholarly standards of the College and, equally important, the personal ethical standards of our students, it is essential that written assignments be a student’s own work, just as is expected in examinations and class participation. A student who commits academic dishonesty is subject to a range of penalties, including suspension or expulsion. Finally, the underlying principle is one of intellectual honesty. If a person is to have self-respect and the respect of others, all work must be his/her own.”

**Compliance statement:**

The student work in this course is in full compliance with the federal definition of a four-credit hour course. Please see the Registrar’s Office web site (<https://registrar.lafayette.edu/wp-content/uploads/sites/193/2013/04/Federal-Credit-Hour-Policy-Web-Statement.doc>) for the full policy and practice statement.

**Course Schedule**

Please note I have not yet confirmed the date for the service learning project with the teacher we will be working with at Paxinosa, so this schedule may change. I may also adjust the class schedule if a significant portion of the class is unable to attend on a scheduled presentation day.

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| --- | --- | --- |
| Week | Day | Topic |
| 1 | 8/30  9/1 | Class overview and planning, finding papers  Service-learning work session |
| 2 | 9/6  9/8 | Paper Discussion  Final project and debate discussion |
| 3 | 9/13  9/15 | Paper Discussion  **Present service-learning ideas** |
| 4 | 9/20  9/22 | Paper Discussion  Discussion on ways to communicate science, work on social media projects |
| 5 | 9/27  9/29 | Paper Discussion  **Present social media projects** |
| 6 | 10/4  10/6 | Paper Discussion  **Service-learning presentations run through (subject to change)** |
| 7 | 10/11  10/13 | No class fall break  **Service-learning presentations (subject to change)**  Midterm given out |
| 8 | 10/18  10/20 | Paper Discussion **Service-learning reflection due (subject to change)**  Debate work session.  **Midterm due end of day 10/21** |
| 9 | 10/25  10/27 | Paper discussion  Debate work session. **List of debate sources due at beginning of class** |
| 10 | 11/1  11/3 | Paper discussion  **Debate** |
| 11 | 11/8  11/10 | Paper discussion  Work on final project. **Debate reflection due** |
| 12 | 11/15  11/17 | Paper discussion  Work on final project. **Outline and list of sources due** |
| 13 | 11/22  11/24 | Work on final project  **No class Thanksgiving** |
| 14 | 11/29  12/1 | Present draft version of final project  Work on final project |
| 15 | 12/6  12/8 | **Present final version of final project**  Class Wrapup  **Final reflection due end of day Friday 12/9** |