**Biopsychology Lab**

**PSYC 373 - Section 201**

**Fall 2021**

**Instructor:** Allison Petrie (apetrie@gmu.edu)

**Class Time:** Monday 7:30-9:20pm

**Class Location:** David King Hall #2074

**Office Hours**: Thursday 10:00 – 11:00 AM or in-person by appointment

**Office Location:** Virtual, zoom links will be sent via Blackboard

**Goals of Lab**: The primary goal of this lab is for students to become familiar with brain structure and function through lectures and dissection. The course will begin with a broad survey of cellular neuroscience and then proceed into sheep brain and eye dissections, paying particular attention to brain structures and functional anatomy. The applied portion of the course will be a broad survey of behavioral neuroscience, histology/microscopy, cognitive neuroscience, and electroencephalography (EEG).

**Optional text**: Cooley, R. K., & Vanderwolf, C.H. (2001). The Sheep Brain: A Basic Guide. A.J. Kirby Co.: London.

**Additional Readings:** Additional readings will be distributed via Blackboard. Students are expected to complete the readings prior to class, especially for lab activities and software downloads.

**Class Format & Grading**

This class will be held entirely in person. Information will be presented in PowerPoint lectures and additional assigned readings. Students are responsible for understanding all of the information presented in PowerPoint lectures and dissections. The material covered in lab will be the basis of quizzes and exams, so attendance is highly encouraged. Attendance during dissections is particularly important because these classes will be your only time to dissect the sheep brains & eyes.

Grading for course

Practical 1: 15%

Practical 2: 25%

Quizzes (2): 20% (10% each)

Lab Reports (4): 40% (10% each)

Grading Scale

A+ (97 – 100%); A (93 – 96%); A- (90 – 92%); B+ (87 – 89%); B (83 – 86%); B- (80 – 82%); C+ (77 – 79%); C (73 – 76%); C- (70 – 72%); D (60 – 69%); F (59% and below)

Policy Regarding Late Assignments

Permission to postpone a quiz or to turn in an assignment late will only be given for very important and acute reasons. Any make-up quiz will be structured like the original, but the content will be different. The student must obtain written medical documentation or provide justification for an absence from a quiz or other assignment. Any documentation required for excused absences MUST be turned in by the following lab period. Unless you make prior arrangements with me, late assignments will be subject to a 10% grade reduction after one week, and no credit after two weeks.

Policy Regarding “Curving” and Extra Credit

I will curve only on practicals if the highest grade is not a 100. I will not explicitly announce extra credit on practicals, quizzes, or assignments, although I may have “easter egg” extra credit to administer. I will offer extra credit opportunities throughout the semester for you to take advantage of. These will be announced via Blackboard.

**Course Requirements and Assignments**

Lab Practical Exams

These exams consist of identification and/or questions regarding pinned brain structures. **There will be no make-ups for a missed practical unless you have obtained my approval.** You MUST let me know well in advance that you will miss a practical. If you are sick or have an emergency, then you must let me know ASAP. The nature of the exam does not allow it to be reproduced or preserved. Practical I will cover Brain Tours I & II and is worth 15% of your grade. Practical II is a cumulative final and is worth 25% of your grade.

I will administer what are called “mock practicals” during the classes that are study sessions. These will not be graded; however, if you attend, you will *significantly* increase your chances of obtaining a good grade on the real practical.

Quizzes

The quizzes will be based on lecture material covered in class. These quizzes will not require identification of brain structures as observed through dissection. Quiz questions can take the form of multiple choice, true/false, fill-in-the-blanks, labeling a diagram, and/or short-answer format. Quizzes start the first minute of class and are timed. Once the time is up you must turn in the quiz. If you are late to class or have missed the quiz, then you will **NOT** be able to make it up. There will be 3 quizzes throughout the semester, your lowest score will be dropped.

Lab Reports

Students will complete four (4) lab reports that concern (1) action potential simulations, (2) color perception and blind spots, (3) behavioral neuroscience and histology, and (4) cognitive neuroscience and EEG. These lab reports will be due via a provided Blackboard link at the start of class (the class will not meet during exam week).

Technology Statement

Required knowledge of technology for this course includes ability to retrieve handouts sent via email to your GMU address or posted on Blackboard (mymason.gmu.edu). Occasionally I may use computer programs or the Internet in class to present demonstrations of relevant material. You may also wish to use websites provided by me to study for the lab practical exams.

**Title IX Statement**

Notice of mandatory reporting of sexual assault, sexual harassment, interpersonal violence, and stalking:  As a faculty member, I am designated as a “Non-Confidential Employee,” and must report all disclosures of sexual assault, sexual harassment, interpersonal violence, and stalking to Mason’s Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason’s confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance or support measures from Mason’s Title IX Coordinator by calling 703-993-8730 or emailing [titleix@gmu.edu](mailto:titleix@gmu.edu).

**The Honor Code**

Students in this course are expected to behave at all times in a manner consistent with the GMU Honor System and Code. (<http://mason.gmu.edu/~montecin/plagiarism.htm>). Students are encouraged to study together as much as possible throughout the course, however, no assistance, sharing of information, or discussion of exam items or answers between students may take place. For all work, the name that appears on the paper must be the author. Information that is used from an outside source must be cited in correct APA or JNeurosci format. Violations of the Honor Code will not be tolerated in this course and will be immediately reported according to GMU procedures. The instructor reserves the right to use software to determine the extent to which the work is the student’s. The instructor for this course reserves the right to enter a failing grade to any student found guilty of an honor code violation.

**Disability Help**

Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit <https://ds.gmu.edu/> for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: [ods@gmu.edu](mailto:ods@gmu.edu) | Phone: (703) 993-2474

**Miscellaneous**

Official Communications via GMU Email: Mason uses electronic mail to provide official information to students. Examples include communications from course instructors, notices from the library, notices about academic standing, financial aid information, class materials, assignments, questions, and instructor feedback. Students are responsible for the content of university communication sent to their mason email account and are required to activate that account and check it regularly. As a tip, please include your G-number and the course section in the subject of the email in all email correspondences with all instructors. In the event that class is cancelled, then I will notify students via email, and I will reorganize the class schedule in order to address all material. Due dates for quizzes, practicals, and/or assignments will be changed if necessary. **Recording of classroom lectures is not allowed without explicit permission by the instructor.**

Students may not reproduce (including uploading to the Internet) any portion of the exam. Students who attempt to photograph or in any way capture information about the exam for others’ use will be reported for an honor violation.

Life is stressful and we all need a little support sometimes. Students are encouraged to contact Counseling & Psychological Services (3129 Student Union Building I, http://caps.gmu.edu/) at 993-2380 for assistance with any kind of psychological/life problem or crisis situation. I can help with referrals for students with particular counseling needs so please feel free to talk with me for help with anything.

**Disclaimer:** The instructor reserves the right to change the syllabus and its content. Any changes will be announced in writing. If you are confused about a deadline, please let me know.

**Selective Withdrawal Period** (undergraduate students only): Undergraduate Degree seeking students may request a maximum of three-selective withdrawals during their entire undergraduate career. Before/If you decide that you would like to selectively withdraw from the course, please talk to your adviser and/or me to verify that it is the best decision for you.

**Please note that this course requires active participation in dissection of animal tissue (brain and eye) preserved in fixative as well as potential carcinogenic/teratogenic chemicals that are commonly used in histology. If you have a concern about this, or cannot participate for some reason, please meet with me as soon as possible.**

**Tentative Course Schedule**

You are responsible for any/all announcements and syllabus modifications made by me through Blackboard announcements.

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| **Date** | **Tentative Course Schedule:** | **Assignments** **Due:** |
| 8/23 | Syllabus Overview  Lecture 1&2: Neurophysiology & Action Potentials  Introduction to MetaNeuron |  |
| 8/30 | Quiz 1 (Neurophysiology)  Lecture 3: Brain Tour I  Surface Identification of Structures | Lab Report 1: MetaNeuron Simulation – Due via BB no later than 7:30pm |
| 9/6 | **Labor Day: No Classes** |  |
| 9/13 | Lecture 4: Brain Tour II  Surface Identification of Cranial Nerves |  |
| 9/20 | Mock Practical 1/Review |  |
| 9/27 | Practical 1 |  |
| 10/4 | Lecture 5: Visual System (Eye Dissection) |  |
| 10/11 | **Columbus Day:**  **Monday class will meet on Tues., October 12**  Quiz 2 (Visual System)  Lecture 6 Part 1: Midsagittal Dissections | Lab Report 2: Color Perception & Blindspot – Due via BB no later than 7:30pm |
| 10/18 | Lecture 6 Part 2: Coronal Dissections |  |
| 10/25 | Mock Practical 2/Review |  |
| 11/1 | Practical 2 |  |
| 11/8 | Lecture 7: Histology & Behavioral Neuroscience |  |
| 11/15 | Quiz 3 (Histology & Behavioral Neuroscience) | Lab Report 3: Histology & Behavioral Neuroscience - – Due via BB no later than 7:30pm |
| 11/22 | Lecture 8: Cognitive Neurosciences & EEG |  |
| 11/29 | Final thoughts, Wrap-up material | Lab Report 4: Cognitive Neurosciences & EEG - – Due via BB no later than 7:30pm |

**Important Dates:**

First day of Fall Classes: Monday August 23

Last day to add: Monday August 30

University Closed: Monday September 6. (Labor Day)

Last day to drop: Tuesday, September 7

Unrestricted withdrawal period: Wednesday September 15 – Monday September 27

University Closed: Monday October 11 (Fall Break)

University Closed: Wednesday November 24-Friday November 26 (Thanksgiving)

Reading Days: Monday December 6 and Tuesday December 7