**Instructor:** Dr. Jennifer Brielmaier **E-mail address:** jbrielma@gmu.edu

**Class time:** MW 12-1:15 pm **Office phone #:** 703-993-1469

**Class location:** Art and Design Building L008 **Office location:** DK 2044

**Office hours:** Mon. 1:30-2:30 pm

**Office hours signup:** <https://brielmaiersontag.youcanbook.me/>

**Course Description:**

This is the second semester of a two-part course on the relationship between the nervous system, cognition, and behavior. In the first semester (PSYC 375), you learned about neurons and neuronal function, basic brain anatomy, and the sensory systems (auditory, visual, somatosensory and chemical). In this semester, you will learn about the neurobiological bases of selected behaviors and cognitive processes. A special emphasis will be placed on clinical applications of course material and on neuroscience research findings that have shed light on the intricacies of the brain-behavior relationship.

This course will consist of a series of lectures and guided activities, with assignments, quizzes and exams to be completed in class. There is also an end of semester video presentation. All assignments are described in detail below.

**Required Text:** Bear, M.F. (2015). Neuroscience: Exploring the Brain (4th edition). Lippincott, Williams and Wilkins. ISBN: 9781451109542

**Course Objectives:** As a result of completing work in this course, students will be able to:

* Describe the structure and function of brain systems controlling selected examples of behaviors and cognitive processes
* Describe neurochemical and hormonal influences on behavior and cognition
* Explain the neurobiological bases of various psychiatric and neurological disorders
* Communicate information about a specific course-related topic to a lay audience

**Assignments:**

* **Readings:** Assigned readings will mainly consist of chapters from the textbook, but may also come from outside sources (e.g. research or review journal articles). These outside readings will be distributed via Blackboard and/or GMU email. Our time together in class will be much more productive if you come to class prepared. Part of being prepared is completing all readings **BEFORE** you come to class. You don’t need to understand every word, but you need to have a clear idea of the overall concepts addressed and be prepared with possible questions or discussion points.
* **Quizzes:** There will be a total of three **unannounced** quizzes at the beginning of class covering material from the prior week’s lesson. These quizzes count for **extra credit** (up to 5 points per quiz)that will be added to your final exam raw score, and will be in the same format as the exams. **Because they count as extra credit, there will be no make-up quizzes allowed under any circumstances.**
* **In-Class Assignments:** I will provide time during most class meetings for you to complete an assignment in class. Assignments will relate to that day’s material and will address topics that will be on the exams. Therefore, it is highly encouraged that you attend each class and complete the assignments. Depending on the day, assignments will be completed individually, in pairs, or in small groups. Having access to the course slides and the Internet will help you complete the assignments. You will submit the assignments **in class** online via Blackboard (either typed on your laptop/tablet or uploaded as a photo). Assignments will be graded based on completion as opposed to accuracy. However, you must address all questions in order to receive credit. You are allowed to drop two of these assignments; thus, there will be no make-ups. These assignments will account for 15% of your final grade.
* **Exams:** There will be a total of three regular exams consisting of multiple choice, fill in the blank, and short answer questions. Each exam accounts for 20% of your final grade (60% total). There is an **optional** cumulative final exam that may be taken to replace the lowest of your 3 exam scores.
* **“5 Minute Fact” Video:** Explaining complex concepts to a lay audience requires a deep understanding of the topic and is an important skill for scientists to learn. Toward the end of the semester, each of you will create a short (3-5 minute) video on a topic relevant to the brain-behavior relationship and share it with the class. You should strive to make your video entertaining yet informative. See the Society for Neuroscience Brain Awareness video contest winners for inspiration: <https://www.brainfacts.org/for-educators/programs-and-events/brain-awareness-video-contest>. As part of your grade you will summarize and critique 3 other students’ videos. Together your video and summaries count for 10% of your final grade.

**Attendance and Makeup Policies:**

* **Attendance:** Attendance *per se* is not part of your grade for this course. However, arriving late, leaving early and/or failing to attend class will adversely affect your in-class assignment grade and will interfere with your ability to learn the course material. With that being said, I understand that emergencies do come up. If you must miss a class, please go to a classmate first for notes. I will be glad to meet with you about any questions after you do this. I also welcome questions via email anytime. If you must arrive to class early or leave late, please seat yourself as close to the door as possible to avoid disrupting others. ***NOTE:* You are responsible for all announcements and any syllabus modifications made in class each week whether you are present or not.**
* **Assignment Makeup Policy:** Because you are allowed to drop two of the in-class assignments without penalty, makeups are not allowed. Students who provide written medical or similar documentation explaining an extended absence from class (i.e., missing two or more consecutive classes) will be allowed to make up assignments at my discretion. Because they count for extra credit, makeup quizzes are not allowed under any circumstances, including arriving late to class the day a quiz is given. Late “5 Minute Fact“ video submissions will be subject to a 10% penalty per day. Points will be deducted from your overall score if your video plan is submitted late or not at all.
* **Exam Makeup Policy:** If you fail to take Exam 1, 2 or 3 on the scheduled date, you will need to plan on taking the final exam in order to make up for the missing grade.

**Class Cancellation Policy:**

In the event that I need to cancel class, you will be notified about the cancellation and any makeup plans via email and/or Blackboard as soon as possible. Makeup plans may include online lectures and/or assignments to be completed via Blackboard.

**Grading Breakdown:**

In-Class Assignments (15%) + Exams (3 x 25% = 75%) + “5 Minute Fact” Video (10%) = 100%

Grades will be assigned based on the following scale:

A+ 97% or above B+ 87-89% C+ 77-79% D 60-69%

A 93-96% B 83-86% C 73-76% F 59% & below

A- 90-92% B- 80-82% C- 70-72%

Incomplete (IN) grades will be assigned only in cases of compelling and documented need, in accordance with policies set forth in the University Catalog.

**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**.

**Technology Statement:**

Required knowledge of technology for this course includes ability to retrieve additional materials sent via email to your GMU address and/or posted on Blackboard. Please be sure you have access to Blackboard and that your GMU email account is active. I will post relevant information and documents via the latest version of Microsoft Office, so make sure to have the latest version of office or download the converter in order to read all important documents. *Policy on technology in the classroom:* Laptops and tablets are permitted. The use of cell phones is discouraged. Anyone found using their device for something other than course-related work will not earn credit for the in-class assignment given that day (or for the following class if no assignment is given that day).

**Special Needs:**

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 [http://ds.gmu.edu/](http://ds.gmu.edu/%22%20%5Ct%20%22_blank) 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 | Phone: (703) 993-2474

**Student Services:**

* **Counseling and Psychological Services:** The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance (See [http://caps.gmu.edu](http://caps.gmu.edu/)).
* **Student Support and Advocacy Center:** The George Mason University Student Support and Advocacy Center offers one-on-one support to students, interactive programming, and off-campus resources. Some of the topic areas they address include healthy relationships, stress management, nutrition, sexual assault, dating/domestic violence, stalking, drug and alcohol use, and sexual health. See <http://ssac.gmu.edu> for more information.

**The GMU Honor Code will be strictly enforced.** Cheating and plagiarism will not be tolerated and will be reported to the University Honor Board and/or penalized. Plagiarism is defined as using another’s work (e.g. words or ideas) without giving proper credit. Sources of information used in all coursework must be properly cited so as to avoid plagiarism. The instructor for this course reserves the right to enter a failing grade to any student found guilty of an honor code violation. Here is an online quiz that you can take to check your knowledge about what is and is not plagiarism: <http://www.easybib.com/guides/quiz-is-it-plagiarism/>.

**Religious Holidays:**

Please refer to George Mason University’s calendar of religious holidays and observations (http://ulife.gmu.edu/calendar/religious -holiday-calendar/). It is the student's responsibility to speak to the instructor in advance should their religious observances impact their participation in class activities and assignments.

**Student Privacy:**

George Mason University strives to fully comply with FERPA by protecting the privacy of student records and judiciously evaluating requests for release of information from those records. Please see George Mason University’s student privacy policy <https://registrar.gmu.edu/students/privacy/>

**Add/drop deadlines:**

Last day to add/drop with 100% tuition refund Jan 28

Last day to drop with 100% tuition refund Feb 5

Last day to drop with 50% tuition refund Feb 11

# *Tentative* Schedule

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| **Dates** | **Topic(s)** | **Readings/****Assignments Due (BY 11:59 pm on date listed)** |
| Jan 22  | Course Introduction |  |
| Jan 27 & 29 | Spinal Control of Movement | Chapter 13 |
| Feb 3 & 5 | Brain Control of Movement | Chapter 14 |
| Feb 10 & 12 | Chemical Control of the Brain and Behavior | Chapter 15 |
| Feb 17 & 19 | Motivation | Chapter 16  |
| Feb 24 & 26 | Feb. 24: Exam 1 Review**Feb. 26: EXAM 1 (Chapters 13, 14, 15, 16)** |  |
| Mar 2 & 4 | Sex and the Brain | Chapter 17 |
| Mar 9 & 11 | ***NO CLASS – SPRING BREAK*** |  |
| Mar 16 & 18 | Brain Rhythms and Sleep | Chapter 19 |
| Mar 23 & 25 | Memory Systems  | Chapter 24**3/25: 5 Min Fact video plan submitted via Blackboard** |
| Mar 30 & Apr 1  | Molecular Mechanisms of Learning/Memory | Chapter 25 |
| Apr 6 & 8 | Apr 6: Exam 2 Review**Apr 8: EXAM 2 (Chapters 17, 19, 24, 25)** |  |
| Apr 13 & 15 | Language | Chapter 20 |
| Apr 20 & 22 | Brain Mechanisms of Emotion  | Chapter 18 |
| Apr 27 & 29 | Mental Disorders/Brain Dysfunction | Chapter 22**4/29: 5 Min Fact video posted to Padlet wall** |
| May 4 | **EXAM 3 (Chapters 18. 20, 22)** |  |
| May 11 | **OPTIONAL Final Exam 10:30 – 1:15 pm** | **Video summaries submitted via Blackboard** |