PSYCHOLOGY 209H
BRAIN AND BEHAVIOR
Fall 2018
Room 101 Giltner
M/W 4:10-5:30

Instructor:
Laura Smale, Professor, Psychology Department and Neuroscience Program
Office: 222 Giltner
Office hours: By appointment
Telephone: (517) 432-1632
e-mail: smale@msu.edu

Teaching Assistant:
Jessica Lee
Email: leejes17@msu.edu
Office: 221B Giltner
Office hours: By appointment

Readings
There is a great companion website for
(2) Additional readings will come in the form of class handouts, PDFs, and Web sites
Full details of the readings and when they need to be read are available on D2L.

Extra readings for the curious: There is a companion website associated with your textbook for those of you curious to learn more: http://www.biopsychology.com/news/index.php?book=MM. It provides links to news articles on topics relevant to issues in behavioral neuroscience. It’s a great way to start learning about the newest research findings on topics that you may be especially interested in. These are not assigned but are available for those of you that are curious to learn more.

Objectives
This course will cover a range of issues related to the biology of behavior, including the structure, function, and evolution of the brain. First, we will introduce some basic structures of the nervous system and discuss how single cells function within the networks that ultimately enable us to think, feel, and behave the way that we do. Then, some principles of sensory systems will be addressed, as well as the biology of sex and reproductive behaviors, sleep and rhythms, aggression, learning, memory, language and cognition. We will also learn about some of the ways that problems can arise in neural systems and in the behaviors and mental processes that they regulate. A range of social issues that can be informed by a better understanding of the nervous system will be discussed, and sometimes debated. The overarching goal is to provide you with a basic understanding of relationships between the nervous system and behavioral and mental states, and how some of these issues can be studied. Another goal is to engage you in critical thinking about research, and about some of the social/ethical issues related to behavioral neuroscience.
**SCHEDULE**

** Indicates days devoted to discussion of special topics (described below).

August 29  Introductions
  Chapter 1

September 3  **NO CLASS**

September 5  Cells and structures
  Chapter 2

September 10  Cells and structures
  Chapter 2

September 12  **Looking into a living brain: What can neuroimaging tell us, and how should and shouldn’t it be used?**
  Chapter 2 + Reading List

September 17  Neurophysiology
  Chapter 3

September 19  The chemistry of behavior
  Chapter 4

September 24  **The chemistry of behavior**
  Chapter 4 + Reading List

September 26  **EXAM 1** [Covers material from August 29 through September 24]

October 1  Evolution of the brain and behavior
  Reading: Handout

October 3  Somatosensory systems
  Chapter 5

October 8  Hearing and tasting
  Chapter 6

October 10  Hormones and sex: Basics
  Chapter 8

October 15  **Intersexuality and gender identity**
  Chapter 8 + Readings and a film on the Reading List

October 17  **Sexual orientation**
  Chapter 8 + Reading List

October 22  Homeostasis
  Chapter 9

October 24  Biological rhythms
  Chapter 10

October 29  **EXAM 2** [Covers material from October 1 through October 29]

October 31  Sleep
  Chapter 10

November 5  Sleep Disorders
  Chapter 10

November 7  **Emotion and aggression**
  Chapter 11 + Reading List

November 12  Psychopathology
  Chapter 12

November 14  **Psychopathology and psychosurgery**
  Chapter 12 + Reading List
November 19  **Memory and the case of HM  
  Chapter 13 +Reading List
November 21  Paper preparation
November 26  Memory and learning: back to some basics  
  Ch. 13
November 28  Attention and consciousness  
  Chapter 14
December 3  Language and hemispheric asymmetry  
  Chapter 15
December 5  EXAM 3 [Covers material from October 31 through December 3]
December 12  Finals week-Papers are due by 5:00 p.m. (but there is no final exam).

Review sessions will be held in room 101 Giltner prior to each of the 3 exams:
September 24, 5:30-6:30
October 26, 2:30-3:30
November 30, 3:30-4:30

CLASS FORMAT, ASSIGNMENTS AND GRADES
Class meetings
During most class periods we will learn about basic behavioral neuroscience using lectures, small group problem solving, or discussions focused on specific topics.

Seven class meetings will be devoted primarily to discussions of controversies associated with a topic in behavioral neuroscience and to related readings that have been assigned for that day; these sessions are indicated by ** on the schedule. On those days the class will begin with a short lecture and then some questions will be posed for you to focus your discussions on. This will begin with dividing into smaller groups and you will be given approximately 15-30 minutes to go over the issues. These discussions should address the nature of the research and its relevance, or lack thereof, to an associated social issue or controversy. Sometimes each group will be asked to develop a case in support of one side or another of a controversy. If there is time, the class will then reconvene as a whole and we will have a general class discussion during which the different groups present their positions and the reasoning behind them. Please see the full reading list. It is very important for you to read these carefully and critically, with an eye towards identifying their strengths and weaknesses, BEFORE class. Some are written by people that have a strong point of view on the issue in question, and some might have arguments/interpretations that may be flawed. It is your job to read them critically and to think about the issues they raise before class begins. [Note: Everyone can receive credit for 6 of the 7 class periods devoted to discussions. It will be impossible to make up credit for participating in a class discussion, thus, if you have to miss class for some reason, e.g. if you are sick, that will be the one that is dropped and you can still receive full credit for this assignment via the other 6 discussion periods.]

Paper
Your paper should focus on implications that data in behavioral neuroscience might, or might not, have for a related social policy, regulations, laws or ethics more generally. The assignment is described in detail in a “rubric” posted on D2L, but here are the four key components that your paper must include:

1. Introduction to the nature of the controversy
2. Critical review of key scientific data on the biology relevant to the issue
3. Discussion of whether and how these data have any implications for the social/ethical issue in question.
The paper should be submitted via a drop box that will be set up on D2L.

**Exams**
There will be three exams in this course. Each will test your knowledge and comprehension of material covered in class, assigned readings and Web sites during the dates indicated on the schedule. The format will be varied but most questions will ask for short answers, essays (1/2-1 page) or definitions. You may also be asked to draw or interpret a graph, or put labels on a figure. Study questions to help with preparation for exams will be provided at least 1 week before the exam. A make-up exam (different from the primary one) will be granted only in the case of a documented medical, religious, or legal reason for missing the exam. **NOTE: THERE WILL BE NO FINAL EXAM.**

**Overall Grade**
You will have an opportunity to earn 400 points in this course:

- **276** Exams (3 exams x 92 points)
- **24** Participation in group discussions (6 discussions x 4 points)
- **100** Paper
- **400** TOTAL

Final course grades will be determined according to a standard grading scale: 
- ≥90% total points=4.0,
- 85-89%=3.5, 80-84%=3.0, 75-79%=2.5, 70-74%=2.0, 65-69%=1.5, 60-64%=1.0 and <60%=0.

**SOME ADDITIONAL ISSUES**
**A general comment**
Your TA, Jessica Lee, and I are here to help you learn and we are very happy to discuss with you a host of issues related to the brain, behavior and biological psychology more generally, including material covered in class or in the text, as well as questions you might have that go beyond them. I would also like to help anyone that is having difficulties with the class and that might like general advice about how to study more effectively.

**D2L**
We will use the web-based D2L platform as the primary means of communicating outside the classroom. Abbreviated versions of Power Point files will be posted during the week following the lecture.

**Questions about grades**
If you have a disagreement about how a question on an exam has been graded and would like that concern to be addressed you must bring it to the attention of both Jessica and I within one week of the day that you received the score on the exam. Specifically, (1) return the exam to us and (2) send us an email describing why you believe that there was a mistake, i.e. why you believe that your answer was correct. We will go over it and arrange to talk to you about it and we will correct any mistakes that we may have made.

**Classroom conduct**
Please treat other members of the class with courtesy and respect. **Cell phones must be turned off** before class starts and put away unless you have been explicitly told to access the internet. Texting, emailing, game playing, and web surfing during class are counterproductive to learning and may interfere with others, and it can be rude. I reserve the right to confiscate for the duration of class any
device that I feel is affecting my ability to teach effectively regardless of whether you think it is not distracting you or others. Try to leave the outside world outside of class and be fully present!

**Observing a major religious holiday**
You may make up course work missed in order to observe a major religious holiday if you make arrangements one week in advance.

**Honor and ethics**
Here is a very nice item, “The Spartan Code of Honor,” that MSU students have written for each other: “As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do.”

If you would like to understand some of the issues related to that “code of honor” in the context of student papers and the possibility of plagiarism you can go to this site: [https://msu.edu/unit/ombud/academic-integrity/plagiarism-policy.html](https://msu.edu/unit/ombud/academic-integrity/plagiarism-policy.html). One of the things indicated on that site is that students are the ones responsible for knowing what plagiarism is (beyond the fact that it’s bad). The consequences of it may be severe (e.g. failing the course...etc.) and instructors are obligated to inform the University Office of the Registrar of the event. If you have questions about this just let me know, or visit this site: [http://splife.studentlife.msu.edu/regulations/general-student-regulations](http://splife.studentlife.msu.edu/regulations/general-student-regulations)

**Limits to confidentiality**
You should be aware that University employees, including instructors, may not be able to maintain confidentiality when it conflicts with their responsibility to report certain issues based on external legal obligations, or that relate to the health and safety of MSU community members and others. As the instructor, I must report the following information to other University offices if you share it with me:

- Suspected child abuse/neglect, even if this maltreatment happened when you were a child
- Allegations of sexual assault or sexual harassment when they involve MSU students, faculty, or staff
- Credible threats of harm to oneself or to others

These reports may lead to contact from a campus official who will want to talk with you about the incident that you have shared. In almost all cases, it will be your decision whether you wish to speak with that individual or not.

**Accommodations for Disabilities**
Accommodations for Students with Disabilities: Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at rcpd.msu.edu. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form. Please present this form to me at the start of the term and/or **two weeks prior to the accommodation date**.