

# PSYC 247 – Neuroscience & Society

*Fall 2017*

Course Time: Monday + Wednesdays, 3:30-5pm

Course Location: Leidy Labs, 109

Professor: Hilary Gerstein, Ph.D.

Lecturer & Associate Director of Education

Department of Psychology, Center for Neuroscience & Society

Email: [Hgerstein@psych.upenn.edu](mailto:Hgerstein@psych.upenn.edu)

Office Location: Goddard Labs 203, Hamilton Walk

Office Hours: Tues 12:30-2:20pm or by appointment

Teaching Assistant: Nada Boualam

Email: [boualamn@wharton.upenn.edu](mailto:boualamn@wharton.upenn.edu)

Office Hours: Weds 2:15-3:15pm or  
by appointment

## ***Course Description***

Neuroscience has made tremendous progress toward understanding the neural bases of human behavior. As this progress continues, neuroscience becomes relevant to a wide range of human activities, including law, education, war, politics, and religion. In this course, we will examine the ways in which neuroscience is being applied in diverse sectors of society. For each sector, we will review the relevant neuroscience and then study the application of neuroscience to that sector in more detail. What has neuroscience brought to these endeavors that is new and helpful? Which applications of neuroscience represent genuine breakthroughs and which are “neurohype”? How might these developments change society? What new ethical, legal and social challenges are raised by neuroscience?

## ***Webpage & Email***

The course webpage is available on Canvas. You will find this syllabus, lecture slides, all required readings and other course materials, as well as related links. You are expected to check both your college email and the course Canvas page frequently for course announcements and updates on readings and assignments. I will respond to emails when I can (usually within 24h), but do not expect quick responses during weekend and evening hours and plan accordingly.

## ***Course Policies and Requirements***

**Syllabus + Readings:** This syllabus is your primary source of information about the policies and schedule of the course. If it's in the syllabus, you are responsible for it. This syllabus is provisional and subject to change. You are expected to do the readings as assigned, available on Canvas. Class time will be spent on discussion of the assigned readings, and it will be difficult to fully participate without having prepared.

**Lectures & Classroom Activities:** This course is taught in a lecture-based format but you are encouraged to ask questions! Lecture slides will be posted on Canvas after lecture, however, to succeed in this course, it is recommended that you attend the lectures. If you miss a lecture, you should attempt to get the notes of a fellow student who did attend, as the slides lack detail that you will be responsible for on the exams. Some class meetings will feature small group discussion of the assigned readings or a classroom activity or assignment. I will usually assign groups for group activities and all students are expected to participate fully. Each group need only hand in 1 copy of any work generated in class, but each student will receive their own grade. In-class assignments cannot be made up except in extenuating circumstances (usually involving CaseNet or the involvement of a Dean).

**Note Taking & Technology:** Laptops and tablets are welcome in class, but be mindful of their use and please only use them for note taking, paper reading, and for classroom activities as directed. More broadly, be considerate: it is distracting for your fellow students if you are accessing e-mail or online in class; research has found that laptop use impaired academic performance not only for students using a laptop, but for students within view of a laptop screen even if they themselves were not using a laptop.

That said, some students require a laptop due to learning differences or specific needs and laptops are welcome in class for any students who choose to bring them. However, I am twice as likely to cold call (without warning) on students using laptops than I am on student without laptops. If using the laptop is truly the best method of taking notes and paying attention for you, this will not pose a problem.

Cell phones must be on silent and stowed away during class unless permission is given for their use in a specific activity. Bring a pen and paper with you to every class as I will sometimes ask you to complete activities in class. I also will draw on the board, and will ask you to draw along with me.

Accommodations & Academic Integrity: Any students with documented special needs or learning disabilities should discuss them with the instructor during the first week of class. Please note that Penn has strict rules on academic integrity (see [www.upenn.edu/academicintegrity](http://www.upenn.edu/academicintegrity)). Violations of the rules will be reported to the Office of Student Conduct and will likely result in automatic failure of the course.

### **Grades**

- 25% Midterm 1
- 25% Midterm 2
- 30% Final Exam
- 15% Group Project
- 5% Participation

Group Project: You will also read one work of fiction from a list I will provide, and give a group presentation to the class on the quality of the neuroscience depicted in the book/story and your basis for that judgement based on the work we've done in class. More details will be provided later.

Exams: There are two midterm exams and one final exam. If you are forced to miss a midterm due to illness, conference attendance, religious holiday, etc, you must contact me to arrange a make-up date no later than 24h after the start of the missed exam. Make up exams must be taken within one week of the missed exam. The final exam will take place in accordance with university policy as it is scheduled by the College (**tentatively scheduled for 3pm, Thurs Dec 21<sup>st</sup>**). Conflicts with the final exam will also be handled in accordance with university policy; if you have three finals schedule for that day, come see me.

Re-grading Policy: If you believe there was an error in grading an exam, you must submit your request to the teaching assistant in writing to have the exam regraded, no more than one week after the exam was returned in class. Your request must explain the specific error that you think was made. If you submit a request, the exam will be regraded in its entirety, and the final grade might be higher or lower than your original grade. Please note that exams written in pencil will *\*not\** be regraded. Further, a subset of exams will be photocopied, so please do not make changes after the exams are returned.

Extra Credit: Extra credit can be earned by attending up to 2 talks on neuroscience and society, selected from a provided list, and writing a 1-page summary/reaction to the talk. Each summary = 0.5% of your final grade for a total of 1% of your final grade. Due to the dropbox folder on Canvas by **December 15<sup>th</sup>**.

### **COURSE SCHEDULE**

<b>Week</b>	<b>Monday</b>	<b>Wednesday</b>
1		August 30 <i>Introduction</i>
2	<b>Labor Day Holiday</b>	September 6 <i>Brain Imaging: Hope &amp; Hype</i>

3	September 11 <i>NeuroLaw 1 – Overview, neural basis for self-control (MF guest lecture)</i>	September 13 <i>NeuroLaw 2 – Moral reasoning</i>
4	September 18 <i>NeuroLaw 3 – Free will, theories of punishment</i>	September 20 <i>NeuroLaw 4 – Criminal offenders, excusing conditions</i>
5	September 25 <i>NeuroLaw 5 – Brain-based lie detection</i>	September 27 <i>Review + activities</i>
6	October 2 <b>EXAM 1</b>	October 4 <i>NeuroEducation 1 – Normal brain development</i>
7	October 9 <i>NeuroEducation 2 – Neuroscience in mainstream + special education</i>	October 11 <i>NeuroEducation 3 – Child poverty + development (MF guest lecture)</i>
8	October 16 <i>NeuroEducation 4 – Cognitive enhancement (MF guest lecture)</i>	October 18 <i>NeuroEducation 5 – Brain training games</i>
9	October 23 <i>NeuroEconomics – Making decisions, neuromarketing</i>	October 25 <i>Review + activities</i>
11	October 30 <b>EXAM 2</b>	November 1 <i>NeuroPolitics 1– Bias, identity, choices</i>
12	November 6 <i>NeuroPolitics 2 – Neuro-profiling, prediction, privacy (MF guest lecture)</i>	November 8 <i>Neuroscience + the military</i>
13	November 13 <i>Religion, philosophy + the brain</i>	November 15 <i>Gender, sexuality, identity</i>
14	November 20 <i>Clinical Neuro 1 – Medicalization of life</i>	<b>Thanksgiving (Friday Schedule)</b>
15	November 27 <i>Clinical Neuro 2 – Non-pharmacological brain alteration (MF guest lecture)</i>	November 29 <i>Clinical Neuro 3 – Death + consciousness</i>
16	December 4 <i>Presentations</i>	December 6 <i>Presentations</i>
17	December 11 <i>Review &amp; Catch up</i>	