Instructor: Jesse Rissman, rissman@psych.ucla.edu, 6639 Franz Hall, office hours by appointment

Class Time and Location: Tu/Th 11:00am-12:15pm, 6461 Franz Hall

Course Overview: As our ability to measure and understand the functioning of the human brain has rapidly advanced, so too has our need to grapple with the ethical implications of these neuroscientific tools and discoveries. This seminar will introduce students to the emerging field of Neuroethics and create a forum for discussion and debate about a range of timely topics. We will critically examine the current and potential use of neuroimaging data in the legal system as a means to assess a person’s memories, truthfulness, culpability, and the probability of future criminal behavior. We will consider the personal and societal consequences of the use of cognitively enhancing drugs, memory dampening techniques, brain stimulation, and neural prostheses. We will wrestle with the profound implications of scientists’ newfound ability to measure neural signatures of conscious awareness in putatively vegetative patients. We will explore the ethical issues raised by neural and genetic biomarkers that can predict the onset of crippling neurodegenerative diseases. And we will debate the ethics of neuromarketing. With each topic we consider, our goal will not be to achieve consensus on what’s right and what’s wrong, but rather to understand the ethical quandaries and to think critically about ways that the field could go about addressing them. Students should leave this course with an enhanced appreciation of the many ways in which our work impacts society and a heightened commitment to public engagement.

Assignments/Grading: All students must read the assigned article(s) before each class and come prepared to engage in discussion and debate. Attendance and class participation will constitute 40% of your grade. Enrolled students must also sign up to facilitate class discussion during at least one class; this will constitute 30% of your grade. To prepare for this role, the student facilitator should not only read the assigned article(s), but also read some of the Additional Suggested Readings listed on the syllabus for that day. The student facilitator may choose to prepare a PowerPoint presentation to aid in the discussion of the topic at hand, but the goal should not be to give us a lecture but rather to help describe the relevant neuroscientific and ethical issues and engage the group in a spirited discussion. To this end, the student facilitator should come prepared with questions to pose to the group (this could include role playing exercises, thought experiments, hypothetical scenarios, etc.). The remaining 30% of your grade will be based on a final term paper, due on June 6th, to be written on a topic of your choosing. Additional guidelines for the term paper assignment will be discussed in class.

PDFs for all readings (both required and optional) will be posted on the course CCLE website.
Schedule of Topics:

4/1: What is “neuroethics”?


**ADDITIONAL SUGGESTED READING:**

4/3: The neuroscience of ethics

**ADDITIONAL SUGGESTED READING:**

4/8: Moral agency, responsibility, and the law

**ADDITIONAL SUGGESTED READING:**

4/10: Do we even have free will? Where does neuroscience fit in?
Libet, B (2010). Do we have free will? *Journal of Consciousness Studies, 6*(8–9), 47–57.
Roskies, AL (2012). How does the neuroscience of decision making bear on our understanding of moral responsibility and free will? *Current Opinion in Neurobiology, 22*(6), 1022–1026.

**ADDITIONAL SUGGESTED READING:**


4/15: Why is the legal system increasingly turning to neuroscientists?

**ADDITIONAL SUGGESTED READING:**

4/17: Brains on trial
No readings. We will watch and discuss excerpts from the 2013 PBS special *Brains on Trial with Alan Alda*. http://www.pbs.org/program/brains-trial/

4/22: Does a not-yet-fully-developed brain make adolescents less culpable for their actions?

**ADDITIONAL SUGGESTED READING:**

4/24: Neurocriminology

**ADDITIONAL SUGGESTED READING:**
4/29: Memory on the witness stand


**ADDITIONAL SUGGESTED READING:**


5/1: Neuroimaging techniques for memory detection


**ADDITIONAL SUGGESTED READING:**


5/6: Neuroimaging techniques for lie detection


**ADDITIONAL SUGGESTED READING:**


5/8: Can traumatic memories be dampened, modified, or erased?


**ADDITIONAL SUGGESTED READING:**


5/13: Debating the ethics of memory modification

ADDITIONAL SUGGESTED READING:

5/15: The ethical implications of cognitive-enhancing drugs

ADDITIONAL SUGGESTED READING:
Forlini, C, et al. (2013). Navigating the enhancement landscape. Ethical issues in research on cognitive enhancers for healthy individuals. EMBO Reports, 14(2), 123–128.

5/20: Do currently available “cognitive-enhancing” drugs even work?

ADDITIONAL SUGGESTED READING:
CBS 60 Minutes video: Boosting Brain Power (http://www.cbsnews.com/videos/boosting-brain-power/)

5/22: The neuroethics of non-invasive brain stimulation for cognitive enhancement

**ADDITIONAL SUGGESTED READING:**

Fitz, NS & Reiner, PB (In Press). The challenge of crafting policy for do-it-yourself brain stimulation. *Journal of Medical Ethics*.


**5/27: Neuroenhancement for national security?**


**ADDITIONAL SUGGESTED READING:**


**5/29: Using brain imaging to clinically evaluate disorders of consciousness**


**ADDITIONAL SUGGESTED READING:**


**6/3: Ethical considerations when using neural biomarkers to predict the onset of disease**


**ADDITIONAL SUGGESTED READING:**


Neuromarketing: Why ask people what they like when you could just ask their brains?


**ADDITIONAL SUGGESTED READING:**


**Useful resources:**

International Neuroethics Society, [http://www.neuroethicssociety.org](http://www.neuroethicssociety.org)

Emory University’s Neuroethics blog, [http://www.theneuroethicsblog.com](http://www.theneuroethicsblog.com)

Univ. of Pennsylvania’s Center for Neuroscience and Society, [http://neuroethics.upenn.edu](http://neuroethics.upenn.edu)

Adam Kolber’s Neuroethics and Neurolaw blog, [http://kolber.typepad.com](http://kolber.typepad.com)


**Books on neuroethics:**


