

**SOCIAL COGNITIVE NEUROSCIENCE**  
**SPRING 2013**  
LAKRETZ 110 & MON / WED 3:30-4:45

|                      |  |                            |  |
|----------------------|--|----------------------------|--|
| <b>INSTRUCTOR:</b>   | Matthew Lieberman                                    | <b>TEACHING ASSISTANT:</b> |  |
| <b>OFFICE:</b>       | 4611 Franz Hall                                      | Meghan Meyer               | <a href="mailto:ta.meyer.meg@gmail.com">ta.meyer.meg@gmail.com</a> |
| <b>PHONE:</b>        | x64050   |                            | Franz 6556, Mon 5-6pm, Wed 5-6pm                                   |
| <b>EMAIL:</b>        | <a href="mailto:lieber@ucla.edu">lieber@ucla.edu</a> | Janine Dutcher             | <a href="mailto:ta.jdutcher@gmail.com">ta.jdutcher@gmail.com</a>   |
| <b>OFFICE HOURS:</b> | M1-2; Th3-4  |                            | Franz 2534B, Tues 10-11am, Thur 2-3pm                              |

**Course Overview:** This class will focus on the principles of social cognitive neuroscience (SCN) and survey a broad array of topics in the field. SCN is a fundamental merging of social science questions and neuroscience methods, with particular emphasis on fMRI.

**Readings:** For this class you will read a set of papers each week relating to that week's topic

**PowerPoint Slides:** I will post the powerpoint slides from my lecture *after* each lecture. Please do not ask me to post these slides before class because there are important reasons for why I wait until after class. I know from having taught classes at UCLA for over a decade that if you download the slides after class and have the podcasts (<http://www.bruincast.ucla.edu/>), you'll be fine.

**Grades:** Midterm (50%), Final (50%). The exams are not cumulative. Each exam will consist of multiple choice items. Grades will be based on a curve using the following structure. First I will take the average of the top 10 final scores in the class. This average score becomes the equivalent of a 100%. For instance if this top 10 average is a 97/100 then an A- will be 90% of a 97, and B+ will be 88% of a 97, and so on. This provides you with a curve such that you aren't penalized for hard questions that no one gets right, but it also allows every person in the class to get an A if they do sufficiently well. You can get up to 1.5 pts of extra credit (see below). These points get added after your full score has been computed. So if you have an 88.5 and do the full extra credit that bumps up to a 90.0 and you get an A-.

**Extra Credit:** You have the opportunity to earn 1.5 extra credit point(s) by participating in experiments through the Psychology Department Subject Pool. Serving as a subject in an experiment provides students with direct exposure to psychological research. By participating in experiments, you will have the opportunity to contribute to on-going research at UCLA while getting an inside glimpse of how research studies are conducted.

One-half point is added to your final total for every hour of experiment participation. If you complete 3 hour(s) of experiment(s), you will have 1.5 points added to your final "out of 100" grade at the end of the quarter.

The posting and scheduling of experiments is handled via the Psychology Department Subject Pool system at <http://ucla.sona-systems.com>. More information on how to use the system can be found at <http://www.psych.ucla.edu/undergraduate/subject-pool-experiment-participation>.

| Week of          | Tuesday                    | Thursday                                    |
|------------------|----------------------------|---|
| Week 1: April 1  | Why are we social?         | Cognitive Neuroscience<br>Methods & Anatomy |
| Week 2: April 8  | Social Pain                | Social Reward                               |
| Week 3: April 15 | No class                   | Social Perception                           |
| Week 4: April 22 | Mentalizing                | Mirror Neurons                              |
| Week 5: April 29 | Mindreading                | Midterm Exam                                |
| Week 6: May 6    | Empathy                    | Autism                                      |
| Week 7: May 13   | Self                       | Self-control                                |
| Week 8: May 20   | No class                   | Emotion regulation                          |
| Week 9: May 27   | Memorial Day<br>(no class) | Persuasion                                  |
| Week 10: June 3  | Neuroeconomics             | Final Exam                                  |

Final exam: In class during week 10  
Lecture slides posted at: [www.ccle.ucla.edu](http://www.ccle.ucla.edu)

My book *Social: Why Our Brains Are Wired to Connect* will be used throughout the syllabus and referred to as “Social”.

Readings for each week

**Week 1:**

Ochsner, K. N., & Lieberman, M. D. (2001). The emergence of social cognitive neuroscience. *American Psychologist*, 56, 717-734.

*Social* (Chapter 2) “The Brain’s Passion”

For additional reference: Berkman, E. T., Cunningham, W. A., & Lieberman, M. D. (in press). Research methods in social and affective neuroscience. In H. T. Reis & C. M. Judd (Eds.) *Handbook of research methods in personality and social psychology* (2<sup>nd</sup> ed)

**Week 2:**

Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science*, 302, 290-292.

*Social* (Chapter 4) “Fairness Tastes Like chocolate”

**Week 3:**

Adolphs, R., Tranel, D., Damasio, H., & Damasio, A. (1994). Impaired recognition of emotion in facial expressions following bilateral damage to the human amygdala. *Nature*, 372, 669-672.

Vuilleumier, P., Armony, J. L., Driver, J., & Dolan, R. J. (2003). Distinct spatial frequency sensitivities for processing faces and emotional expressions. *Nature neuroscience*, 6(6), 624-631.

**Week 4:**

Frith, U., & Frith, C. D. (2003). Development and neurophysiology of mentalizing. *Philosophical Transactions of the Royal Society, London, B: Biological Sciences*, 358, 459-473.

Gallese, V., Keysers, C., & Rizzolatti, G. (2004). A unifying view of the basis of social cognition. *Trends in cognitive sciences*, 8(9), 396-403.

**Week 5:**

Spunt, R. P. & Lieberman, M. D. (2012). Dissociating modality-specific and supramodal neural systems for action understanding. *Journal of Neuroscience*, 32, 3575-3583.

*Social* (Chapter 6) “Mirror, Mirror”

**Week 6:**

Singer, T., Seymour, B., O’Doherty, J., Kaube, H., Dolan, R., & Frith, C. D. (2004). Empathy for pain involves the affective but not sensory components of pain. *Science*, 303, 1157-1162.

*Social* (chapter 7) “Peaks and Valleys”

**Week 7:**

Kelley, W. M. C., Macrae, C. N., Wyland, C. L., Caglar, S., Inati, S., & Heatherton, T.F. (2002). Finding the self? An event-related fMRI study. *Journal of Cognitive Neuroscience*, 14, 785-794

MacDonald, A. W., Cohen, J. D., Stenger, V. A., & Carter, C. S. (2000). Dissociating the role of the dorsolateral prefrontal and anterior cingulate cortex in cognitive control. *Science*, 288, 1835-1838.

**Social (Ch 9) Panoptic Self-Control****Week 8:**

Ochsner, K. N., & Gross, J. J. (2005). The cognitive control of emotion. *Trends in Cognitive Sciences*, 9, 242-249.

Lieberman, M. D., Eisenberger, N. I., Crockett, M. J., Tom, S., Pfeifer, J. H., Way, B. M. (2007). Putting feelings into words: Affect labeling disrupts amygdala activity to affective stimuli. *Psychological Science*, 18, 421-428.

**Week 9:**

Falk, E. B., Berkman, E. T., Mann, T., Harrison, B., & Lieberman, M. D. (2010). Predicting persuasion-induced behavior change from the brain. *Journal of Neuroscience*, 30, 8421-8424.

Falk, E. B., Morelli, S. A., Welbourn, B. L., Dambacher, K., & Lieberman, M. D. (in press). Creating buzz: The neural correlates of effective message propagation. *Psychological Science*.

**Week 10:**

Loewenstein, G., Rick, S., & Cohen, J. D. (2008). Neuroeconomics. *Annual Review of Psychology*, 59, 647-672.