Instructor: Dr. Chad Forbes, Ph.D.
Office: 111 Wolf Hall
Office hours: TR: 12:30 – 1:30 p.m.
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Phone: 302-831-7037 (email is preferred)

CLASS MEETINGS: TUESDAYS AND THURSDAYS 2:00-3:15PM, MKL 002

WHERE TO FIND ALL CLASS RESOURCES: HTTPS://SAKAI.UDEL.EDU

Prerequisite

It will be important for you to have a firm grasp on human neuroanatomy. While a comprehensive examination of human neuroanatomy is outside the scope of this course, we will go over the basics of a given region at the beginning of Tuesday’s classes. If you find yourself wanting more after this first class, and I imagine you will, you can also take a free on-line course via MIT: http://ocw.mit.edu/courses/brain-and-cognitive-sciences/9-97-introduction-to-neuroanatomy-january-iap-2003/index.htm. After taking this course you should be ready to perform your own brain surgeries, either on yourself or others. You will also be aptly prepared for the content discussed in this course and for consuming neuroscience literature in the future.

COURSE GOALS

The purpose of this course is to get intimate with the field of social neuroscience. Social neuroscience is the scientific discipline at the intersection of social-personality psychology and cognitive neuroscience. It ultimately provides a means to use neuroscience methodologies to inform social psychological theory and social processes to inform our understanding of the brain. The structure of this course is designed to avoid the pitfalls of social neuroscience and the criticism that the field is nothing more than a modern phrenology movement. That is, the point of the course is not to identify brain regions that are involved in tasks that evoke, for example, prejudiced responses and assume these regions are important for prejudice. Rather, we’re going to examine regions integral for social cognition and cognition in general, seek to understand the basic functions said regions are involved in, and use that information to inform our understanding of prejudice. This is an underappreciated approach to the field but a wholly necessary one. There will be overlap in this course but also an illusion of randomness. But if a
given region is integral for something like self-oriented processing why would it not be involved in many different, seemingly orthogonal tasks?

If you read the assigned papers, participate in discussions and devote yourself to your presentation and writings, by the time you leave this course you will be able to critically think about both social and cognitive neuroscience literatures. You will understand both what the fields can and cannot offer.

**Class Format**

The purpose of this course is to delve deeply in to the field of social neuroscience and neural function. Each week will revolve around two primary questions: “What the hell is this brain region doing?” and “How can we use this information to inform our understanding of a given social process?” By that I mean, what psychological processes are most likely instantiated by a given brain region and how in turn does this inform our understanding of a given social psychological process? All meetings will revolve around discussion. The success of the course is contingent on your participation in these discussions. To this end you will be responsible for generating 5 hypotheses stemming from the assigned readings that revolve around the 2 questions cited above; you need to be prepared to share these hypotheses at every meeting. Finally, you will also be expected to write a grant proposal style paper and present a short overview of said proposal at the end of the semester.

The class will follow a specific format each week that revolves around the readings assigned each week. Specifically:

**Tuesdays:**

1. Every Tuesday will begin with an overview of the anatomy of a neural region of interest. Particular interest will be devoted to what that part of the brain is “hooked up” with. There will also be a brief survey of the social topics covered in that week’s readings. Grad students will lead these initial presentations.
2. After the anatomy presentation students will break out in to groups. The goal will be to discuss the readings assigned for that week. Each student will present the hypotheses they generated prior to class. Students are expected to grade each other based on their hypotheses. Finally, the group is expected to identify 3 hypotheses that sound most plausible and formulate refined hypotheses collectively.

**Thursdays:**

1. Groups review hypotheses identified as most plausible.
2. Groups then present overview of hypotheses to the class.
3. The class discusses what exactly the region is doing in relation to social cognition and how this informs our understanding of social cognition in general.
4. Submit hypotheses on line with score.

Everyone writes a grant proposal. Undergrads are shorter page requirement than grad students.

Course Obligations

Weekly hypotheses:

Each student will be asked to compose five hypotheses specific to the two questions “What the hell is this brain region doing?” and “How can we use this information to inform our understanding of a given social process?” for the assigned readings in a given week. You will be asked to share these questions/comments in class each week so it behooves you to think of something thought provoking and intellectually stimulating. Otherwise who knows what your peers might think of you. Question and comment contributions will be worth 2 points per week for a total of 26 points or 26% of your grade in the course. Hypotheses will be due each Tuesday by 10am and must be submitted via Sakai.

Directing a given week’s discussion:

Each student will be expected to lead a given week’s discussion for their group at some point during the semester. A successful leader will guide group’s discussions and document and synthesize the group’s hypotheses and thoughts.

Class Participation

As mentioned above, class participation is integral to the success of the course and thus is mandatory. Class participation will be worth 10 points or 10% of your grade in the course.

Grant Proposal Style Paper

It is my hope that all the literature we discuss in the course will inspire you and instill you with great research ideas. Being able to develop an innovative study design and communicate that design in a clear and concise way is a critical skill in your development as an academic. To help you develop that skill, your requirement for the final paper is to compose an NSF-style grant proposal on a topic within social neuroscience. Think about your own research and how it might be adapted to fit into the field, and generate a novel research idea. The paper should be 5 pages for undergraduate students and 10-15 pages for graduate students (doublespaced, Times New Roman 12-pt), and must contain the following sections:

Project Summary (1 page max). Provides 1) an overview of the proposal, including an outline of the problem/question of interest and how the issue is going to be addressed in your proposal. This should be about 2 paragraphs. Also detail 2) the intellectual merit of the project, or what knowledge would be gained if your project were to be funded. Finally, outline 3) the broader impact of your proposal. In short, how would society benefit from your project being funded? Being able to communicate your ideas and the importance of your work in the most digestible, impactful and pithy way is absolutely essential for your success as an academic and as a researcher with a hankering for funding. The demonstration of your ability to do this happens here.
Project Narrative. This is the meat of your proposal and consists of 3 primary sections. 1) The narrative begins with a brief overview of the issue/problem and your answer for it. 2) Then you provide a select background literature review that provides an overview of past work and evidence for your crazy ideas. 3) Finally you discuss the proposed research. Here you outline what exactly you plan to do, what exactly you hypothesize and discuss any pilot studies you’ve conducted that provide support for your hypotheses (note in a typical grant proposal you HAVE to have pilot studies, but for the purposes of this paper you do not have to have this information). This section should be very detailed, including expected results.

References. In a normal NSF grant you’d proceed to outline your postdoc mentoring plan, data management plan and whether you plan to have children, how many and what are your current names for them. I’m not going to ask you for any of that (unless you want to provide this info) so just provide a complete list of references in APA format. This project is worth 54 points, i.e., 54% of your grade and is due via Sakai no later than 11:59PM on Thursday, December 1!

Grant Proposal Presentation
Orally communicating your thoughts and ideas in a clear, pithy manner is another absolute necessity for academics. As such, on the final day of class you will be asked to give a 5-7 minute overview of your grant proposal to the class. This will require PowerPoint slides, a lot of heart and a splash of humor. This will be worth 10 points or 10% of your grade in the course.

GRADING POLICY:
Hypotheses from each week: 26 points
Class participation: 10 points
Final paper: 54 points
Final Presentations: 10 points

TOTAL POINTS IN CLASS: 100 PTS.

There will be no grading curve in this course and no +/- grades. Grades will be determined in the following manner:

A = 100 – 90 pts.
B = 89 – 80 pts.
C = 79 – 70 pts.
D = 69 – 60 pts.
F = < 59 pts.
**Policy on Late Assignments:**

Hypotheses and grant proposals are due on time with no exceptions. If you’re shot on your way to class or something horrific like that, and I do mean horrific, then you must (a) inform me that you will be unable to turn in the assignment on the scheduled date and (b) obtain an *official excused absence* from the Dean of your college. See the following link for more information on official excused absences: [http://www.cas.udel.edu/uas/faculty-resources/Documents/Fall%202012%20Newsletter%201.pdf](http://www.cas.udel.edu/uas/faculty-resources/Documents/Fall%202012%20Newsletter%201.pdf)

**Assignments must be completed within one week of the scheduled date.**

**Academic Honesty**

This is always unacceptable and defeats the purpose of college and grad school.

**Course Schedule and Readings**

8/30: Getting to know me getting to know you

9/1: Research Methods/Issues

**Readings:**


9/6: Amygdala
Readings:

Target Articles:


Suggested Readings:


9/13: Hippocampus

Readings:

Target Articles:


**Suggested Readings:**


**9/20: Basal Ganglia** (social reward, relationships)

**Readings:**

*Target Articles:*


**9/27: Anterior Temporal Lobes**

**Readings:**

*Target Articles:*


**Suggested Readings:**


**10/4: Posterior Cingulate Cortex/Precuneus**

**Readings:**

*Target Articles:*


**Suggested Readings:**


**10/11: Posterior Parietal Cortex/Temporoparietal junction/Superior Temporal Sulcus**

**Readings:**

*Target Articles:*


**Suggested Readings:**


**10/18: Motor Cortex/Mirror Neuron System**

**Readings:**

*Target Articles:*


**Suggested Readings:**


10/25: Insula

**Readings:**

*Target Articles:*


*Suggested Readings:*


11/1: OFC

**Readings:**

*Target Articles:*


Suggested Readings:


11/8: ACC

Readings:

Target Articles:


Hughes, B. L., & Beer, J. S. (2012). Orbitofrontal cortex and anterior cingulate cortex are modulated by motivated social cognition. Cerebral Cortex, 22(6), 1372-1381.


Suggested Readings:


11/15: **MPFC (DMPFC/VMPFC)**

**Readings:**

*Target Articles:*


*Suggested Readings:*


11/22: **LPFC (DLPFC/VLPFC)**

**Readings:**

*Target Articles: *


*Suggested Readings:*


Satpute, A. B., Badre, D., & Ochsner, K. N. (2013). Distinct Regions of Prefrontal Cortex Are Associated with the Controlled Retrieval and Selection of Social Information. *Cerebral Cortex*


**11/29: Networks- Self/DMN, TOM & Implicit vs. Explicit processing**

*Readings:*

*Target Articles:*


**Suggested Readings:**


**12/6: Presentations**