

## PHI 5329, Philosophy of Neuroscience

Spring 2017, Mondays, 6:00 p. m.- 8:50 p.m., PSY 228B

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**Office hours** M 2-4, Th 9:30-11:30 and by appointment.

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### IMPORTANT NOTICE!

The message below is from The Office of the Provost and Vice President of Academic Affairs:

**“As of Fall 2014, all faculty are required to document students’ academic activity at the beginning of each course. In order to document that you began this course, please complete the following academic activity by the end of the first week of classes or as soon as possible after adding the course.... Failure to do so may result in a delay in the disbursement of your financial aid.”**

Required Academic Activity:

Take “Attendance Verification Quiz”, in Quizzes area of course website. This quiz will not count toward your course grade. It opens Tuesday, January 10, and closes Tuesday, January 17.

**Course description.** This is an advanced, graduate-level course in the philosophy of neuroscience. This course assumes a *basic* level of familiarity with neuroscientific terms and concepts, but it does not assume, nor does it require expertise in it. Similarly, I also assume familiarity with *basic* philosophical concepts and techniques. Topics may include such foundational issues as the neuron doctrine and the localization of function, as well as more contemporary issues such methodological and epistemological issues in brain mapping, ethics in neuroscience, phantom limb phenomena, the viability of reductionist models, and other issues. Please be aware that this course comes with a demanding workload.

### Texts.

- Carter, R. (2014). *The Human Brain*, 2nd edition.
- All other readings will be provided to you, free of charge, through a combination of online and electronic resources.

### Course Requirements.

**Research presentation.** Toward the end of the semester students will give a research presentation to the class which will be based on the subject of their research paper. This requirement is 20% of your grade, and I will provide more details early in the semester.

**Research paper.** The research paper is a scholarly, detailed exposition on some specialized aspect of **one of the course topics, or a closely related topic central to the Philosophy of Neuroscience.** The paper must be at least 5,000 words long (roughly 20 pages, but I go by word count, not page count), not

counting bibliography, notes, cover page, appendices, and anything other than the main text. Papers that fail to make the length requirement will be severely downgraded or failed, depending on the extent of the deficiency. A separate handout addressing the paper requirement in more detail will be distributed early in the semester. Your final papers are due on the last day of class, on Monday, April 24. The research paper requirement is 30% of your grade. If you do not receive a passing grade on the research paper (a “D”, or score of 65), you will not receive a grade higher than a “D” in this course pass this course, regardless of your performance on the other components in the course. As part of the research paper requirement, you will be required to turn in a thesis statement and rough draft (with outline).

**Cheating and Plagiarism** I do not tolerate cheating or plagiarism and will punish cheaters to the fullest extent allowed through the Office of Student Conduct. If you don’t have enough integrity to do your own work, drop the class now and re-examine your purpose in life and at UCF. Final research papers will be processed through Turnitin.com. The following guidelines are reproduced for your information from the UCF Golden Rule (<http://www.goldenrule.sdes.ucf.edu/conduct.html>):

#### “Academic Dishonesty/Cheating

A. Cheating is a violation of student academic behavior standards. The common forms of cheating include:

1. Unauthorized assistance: communication to another through written, visual, or oral means. The presentation of material which has not been studied or learned, but rather was obtained through someone else’s efforts and used as part of an examination, course assignment or project. The unauthorized possession or use of examination or course related material may also constitute cheating.
2. Plagiarism: whereby another’s work is deliberately used or appropriated without any indication of the source, thereby attempting to convey the impression that such work is the student’s own. Any student failing to properly credit ideas or materials taken from another is plagiarizing.

B. Any student who knowingly helps another violate academic behavior standards is also in violation of the standards.”

**Participation in class discussions.** I will take attendance. Poor attendance will have a negative impact on your grade. Please come ready to discuss the assigned material. The readings are intended to stimulate thoughtful questions, comments and observations. Meaningful participation is required. I will keep track of the quality and extent of your participation, as it is 20% of your course grade. What constitutes good participation? Being respectful of others is required, of course. Disagreement and debate is expected and encouraged, but personal attacks are not. Merely agreeing with someone’s point or saying, “I like that too”, for example, are not considered significant participation. Comments that range off-topic are not considered to be meaningful contributions. Thoughtful, specific criticism or praise of a given text, constructing good arguments for or against a given theory, making important distinctions among cases and positions, or finding some overlooked implication of some claim *are* examples of the kinds of contributions that are significant. If several discussion topics go by and you have contributed little to nothing, assume that 20% of your course grade will be little to zero. Be prepared for me to put you on the spot and to ask you direct questions about the assigned reading. Excessively bad behavior toward others in this class will result in a lower grade, a failing grade, or dismissal from the course, depending on the extent of the improper behavior. Seek neither to dominate the class discussion nor to hide from it.

**Midterm.** There will be a midterm exam roughly half way through the course. The midterm will consist of two parts; the first will be take-home essays due 1 week after they are distributed, and the second will be in-class, objective-style questions and possibly some short-answer questions. The exam will be cumulative back to the beginning of the semester, and is 30% of your grade. For the in-class portion, I will distribute a review 1 week prior to it.

## **E-mail**

E-mail is an **essential** part of this course, and your Knight's email address is considered by UCF to be an official means of contacting you. Please remember the following general guidelines:

- Check your e-mail at least several times a week (daily is better). **Regular e-mail will be used in place of Canvas email**, since I find it to be more convenient and more reliable for most purposes. My email address is: [Jennifer.Mundale@ucf.edu](mailto:Jennifer.Mundale@ucf.edu) or [embodiedmind@earthlink.net](mailto:embodiedmind@earthlink.net)

- Use proper grammar and punctuation in your e-mail messages. Capitalize the first word of a new sentence. **Don't use casual e-mail-ese.** We all make a few errors from time to time, but I will not respond to messages that are excessively sloppy. Have enough respect for yourself and your words to write them carefully; if you don't, others likely won't either.

- **Include descriptive "Subject" headings: something that is descriptive** and relevant to the subject of your e-mail. If you just hit reply to my last message, be sure to change the subject.

- Do not expect to discuss grades or anything confidential in e-mail. I cannot send you your grades in e-mail, as faculty are prohibited from doing so by privacy rules and regulations. I will communicate with you about these by posting them online.

- **Include your name and your class on your e-mail messages** ( I may have hundreds of students in a given semester, and surely more than one class, so identify yourself).

**Grades.** Your grade for this course is based on the following four components:

- 1) Preparation and participation - 20%
- 2) Midterm - 30%
- 3) Research presentation - 20%
- 4) Research paper - 30% (requires that you submit an acceptable rough draft to receive credit for paper)

**Note:** I use the plus/minus grade convention (A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F).

## **Important University Dates**

|                              |   |
|------------------------------|---|
| <b>Drop Deadline:</b>        | Thursday, January 12, 2017, 11:59 p.m.            |
| <b>Add Deadline:</b>         | Friday, January 13, 2017, 11:59 p.m.              |
| <b>MLK Holiday:</b>          | Monday, January 16, 2017                          |
| <b>Spring Break:</b>         | Monday, March 13, 2017 - Saturday, March 18, 2017 |
| <b>Last Day of Class:</b>    | Monday, April 24, 2017                            |
| <b>Last Day to Withdraw:</b> | Wednesday, March 22, 2017 11:59 PM                |
| <b>Final Exams</b>           | Wednesday, April 26, 2017 - Tuesday, May 02, 2017 |

## Initial Topics and Readings

**Week 1, January 9:** Introduction to Class, Student Questionnaires, Syllabus, Preview initial readings. Please begin by acquainting yourself with *The Human Brain textbook*, especially pages 1-109

**Week 2, January 16:** Class Holiday, Martin Luther King, Jr.'s Birthday (observed)  
Please continue reading *The Human Brain textbook*, pp. 1-109, and begin the readings, below.

### **Weeks 3 & 4, January 23 & 30th: Historical Foundations and Classic Debates**

#### **Neuron Doctrine, Cytoarchitectonics, Brodmann**

<http://pegasus.cc.ucf.edu/~jmundale/Chapter3.pdf>

#### **Neuron Doctrine**

Glickstein, "Golgi and Cajal: The neuron doctrine and the 100th anniversary of the 1906 Nobel Prize", <https://wiki.brown.edu/confluence/download/attachments/7953/Glickstein2006ND.pdf?version=1&modificationDate=1156268740000> (Links to an external site.)

#### **History of Localization**

**Stanley Finger, "The Era of Cortical Localization", Chapters 1, 2 & 3** of *Origins of Neuroscience: A History of Explorations Into Brain Function*, excerpt available free from Google Books (Note: it will say that an eBook is not available, but those chapters **are**)

[http://books.google.com/books?id=GMeW9E1IB4C&pg=PA3&source=gbs\\_toc\\_r&cad=4#v=onepage&q&f=false](http://books.google.com/books?id=GMeW9E1IB4C&pg=PA3&source=gbs_toc_r&cad=4#v=onepage&q&f=false) (Links to an external site.)

and Chapter 4, same book above:

<http://pegasus.cc.ucf.edu/~jmundale/Chapter%204%20Origins%20of%20Neuroscience.pdf>

#### **What does it mean to say a function is localized?**

Mundale, "Concepts of Localization" <http://pegasus.cc.ucf.edu/~jmundale/Localization.pdf>

#### **Contemporary Opponents of Localization**

Uttal, "Précis of The New Phrenology" <http://pegasus.cc.ucf.edu/~jmundale/Uttal.pdf>