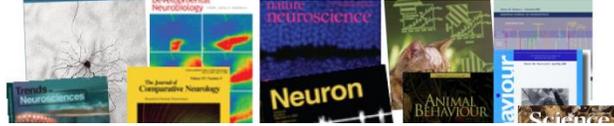


NEUROSCIENCE JOURNAL CLUB FOR UNDERGRADUATES – SPRING 2014



Course title: BIONB 4110, Neuroscience Journal Club for Undergraduates.

Time and place: Monday 3:35 – 4:25 pm, W358 Mudd Hall, 215 Tower Road

Instructor: Carl D. Hopkins, W263 Mudd Hall, cdh8@cornell.edu

Website: <https://courses.cit.cornell.edu/bionb4110/>

Prerequisites: BIONB 2220 (*Introduction to Neuroscience*) or the equivalent, taken previously or concurrently, and a strong interest in neuroscience.

Grade options: letter grade or S/U. Regular attendance is required.

Undergraduate TA: TBA

Office Hours:

Carl Hopkins office hours: Thursdays 3-5 or by apt.

Description:

This Journal Club is intended for Biology undergraduates who wish to become familiar with the primary scientific literature in modern neuroscience by learning to select, read, analyze, understand, and summarize original research papers. Meetings will be held once per week during the regular academic semester during which one or two students will present the research article and lead in the discussion. All students will prepare for each discussion in advance and will contribute to the analysis and discussion of the paper. Undergraduate TAs and the faculty will be available to give advice and help with the selection and interpretation of papers will help facilitate discussion. The subject matter will cover a diversity of fields: neuroscience, developmental neurobiology, sensory systems, motor systems, brain circuits and behavior, behavioral genetics, cell and molecular neurobiology, behavioral biology and biological psychology. The course may be repeated for credit.

Learning Outcomes:

1. Students will learn how to select, read, analyze, understand, and orally summarize a recent scientific paper in the subject areas of behavior and neuroscience.
2. Students will learn about the structure of a typical research paper in neuroscience.
3. Students will learn strategies for making effective oral presentations using slides and graphics and demonstrate creativity for engaging audience participation and discussion.
4. Students will learn about the human and social dimensions of scientific research by learning about the authors, the institutions at which they work, the journals where the work is published, and the sources of funding for the research.
5. Students will learn about electronic resources for searching and abstracting recently published papers in the scientific literature, and they will learn about various on-line

support resources including encyclopedias, citation analysis services, review articles, news stories, and other on-line resources.

6. Students will learn to work in groups.

Some Recommended Journals (not an exhaustive list):

Nature, Nature Neuroscience, Neuron, Science, Journal of Neuroscience, Brain, Cell, Developmental Neurobiology, Science, PNAS, EJN, Journal of Neurophysiology, Journal of Physiology, Journal of Comparative Neurology, Journal of Comparative Physiology A (Sensory, Neural, and Neuroethology).

Other Neuroscience Journals: http://redwood.berkeley.edu/i-stevenson/neuro_journals.html

This is a detailed list that includes a link to the journal website, the publisher, the impact factor, the numbers of articles per year, whether it is a for-profit or not-for-profit organization, etc. Another, even more comprehensive list is found on the Psychology Wiki

http://psychology.wikia.com/wiki/List_of_neuroscience_journals

But few of the entries on this list are actually filled in. Treat it as a list of journal titles.

Washington University St. Louis has a website of Neuroscience Journals at

<http://thalamus.wustl.edu/journals.html>

See <http://www.scimagojr.com/journalrank.php?area=2800> for Neuroscience Journal rankings.

Sources for News and Reviews of Recent Articles:

Faculty of 1000 Article Recommendations: <http://f1000.com/prime/recommendations>

Faculty of 1000 Neuroscience Article recs: <http://f1000.com/prime/recommendations/neurosc>

Cornell Chronicle: <http://www.news.cornell.edu/> (reports on Science Discoveries in the news)

Science and Nature and many other journals have news stories about recent articles in neuroscience.

Evaluation:

Grading, S/U or Letter, will be based on attendance, on written answers to online study questions, and on the oral presentation. Presenters need to forward us their chosen paper and a list of questions one week in advance of presentation. Presenters should meet with the faculty twice: once to discuss selection of the paper, and once to review the presentation and the content of the paper. Attendance is required at all meetings. Students must attend a minimum of 11 of the 14 weekly classes to pass this course. Students will receive feedback on oral presentations both from peers and from faculty.