

NEUR 241/PSY 241 — Fall 2008

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Contact Information

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Books

- Bear, M. F., Connors, B. W., & Paradiso, M. A. (2007). *Neuroscience: Exploring the Brain* (3rd ed.). Baltimore: Lippincott, Williams & Wilkins.
- Journal articles (to be determined).
- **Recommended:** American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, D.C.: Author.
- **Optional:** Diamond, M. C., Scheibel, A. B., & Elson, L. M. (1985). *The human brain coloring book*. New York: Barnes & Noble.

Overview

This course will introduce you to the study of the nervous system at various levels. Neuroscientists work at scales ranging from individual proteins through synapses, cells, circuits, systems, selves, and social groups. Neuroscience I will introduce you to these levels of analysis, with an emphasis on systems, behavioral, and cognitive neuroscience. If you go on to take Neuroscience II you will study in detail molecular and cellular neuroscience. Material from physiology, anatomy, and psychology will be integrated in the readings and in class discussion. Some knowledge of psychology and biology is assumed.

An important component of the course will be an examination of scientific articles. Papers will be selected that highlight both what we know about the nervous system and how we know it. If you leave this class understanding how to read scientific articles then this course will have succeeded on at least one front.

Grading

Exams

There will be four exams, consisting for the most part of short-answer essay questions. Each exam will cover explicitly the material presented in class and in the readings since

Table 1
Topics & Reading List

Topic	Reading	Week
Introduction	1	1
Neurons at Rest	2, 3	1-2
Neurons in Action	4, 5, 6	3-4
		Exam 1
Neuroanatomy	7	6
Sensation & Perception	9, 10	7-8
Movement	14	9
		Exam 2
Motivation	16, 17	10-11
Emotion	18	12-13
		Exam 3
Learning & Memory	24, 25	14-15
Left-overs		15
		Exam 4

the previous exam. There is no cumulative final exam; however, you should not assume simply because you have been tested on something that it is no longer important. An understanding of material presented later in the semester will require a knowledge of material presented earlier.

Term Paper

A term paper is required in this course. It should be about 8 pages long (excluding title page, abstract and references) and must address a topic relating the nervous system and behavior. More information about the paper will be forthcoming. The paper must be written according to APA style. The due date for the paper appears below; your paper **MUST** be turned in by noon on the specified day. Late papers will be penalized at a rate of 10% of their potential value per day.

Attendance

Attendance and participation in class is expected. If you miss one exam, for a sufficiently serious reason, and inform me of this within 24 hours of the exam, you may take a make-up test. If you miss more than one exam, you will receive a grade of ZERO for each additional missed exam.

Course Grade

Your grade will be based on a weighted average of your grades on the exams and the paper. The exams will count for

85% of your grade (lowest test score: 10%; others 25%), and the paper 15%.

Then your grade for the course will be determined as follows:

90 – 100:	4.0	70 – 72.9:	2.0
87 – 89.9:	3.7	67 – 69.9:	1.7
83 – 86.9:	3.3	63 – 66.9:	1.3
80 – 82.9:	3.0	60 – 62.9:	1.0
77 – 79.9:	2.7	< 60:	0
73 – 76.9:	2.3		

My Absences

I will attend two scientific meetings during the course of the semester. The major trip that Albion College's Neuroscience Program undertakes each year is to attend the annual meeting of the Society for Neuroscience (www.sfn.org). This year it is in Washington, DC, November 15 – 19.

The Pavlovian Society (www.pavlovian.org) will meet September 25 – 27 in Weehawken, NJ. I will be gone for those dates. This has become the premier meeting for neuroscientists interested in how learning occurs.

During my absences to attend these meetings class will meet unless I tell you otherwise ahead of time. Your attendance even when I am absent is expected.

Paper Due Dates

Your proposed term paper topic is due on Wednesday, October 1. Note: you must provide me with at least two references that you expect to cite in the term paper.

The term paper is due on **Wednesday, November 19**. Note that the final paper must be turned in as hard-copy (i.e., I need a printed version) and in electronic format via email. I prefer the e-version as a \LaTeX , text, or word-processing (e.g., Word, Wordperfect, etc.) file. If you will use a different format please discuss it with me ahead of time. The e-file is especially useful if questions of plagiarism arise.

I will review printed drafts of the paper if I receive them by Monday, November 10. Note that drafts must be turned in as hard-copy (i.e., I need a printed version).

A Final Note

If you find that you need assistance with the material presented in this course, or if you just want to talk about it, please see me. My office hours are listed above, but if you cannot meet with me at those times please make an appointment with me. I am on campus every day, often including weekends, and will find time to meet with you.