

PSYCH 260/BBH 203 Syllabus

Spring 2016

Instructor

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Teaching Assistant

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TBA

Meeting Location and Time

Section 001

T R 11:15 AM - 12:30 PM

358 [Willard Building](#)

Section 004

T R 4:15 PM - 5:30 PM

208 [Donald H Ford Building](#)

Goals

There is perhaps no more fascinating scientific frontier than the study of the brain and behavior. The goal of this course is to introduce you to the principal methods, theories, and findings of the scientific fields that seek to open this frontier. At the end of the term, you will know more about the following topics:

- how the nervous system is structured and how it functions;
- how the nervous system evolved and develops; and
- how the nervous system influences behavior, thought, action, and emotion.

Resources

Textbook

Watson, N.V. & Breedlove, S.M. (2012). The Mind's Machine, 2/E. Sinauer: Sunderland, MA. <http://www.mindsmachine.com>

Web links

Course syllabus: <https://github.com/psu-psychology/psych-260/blob/master/README.md>

Course repository: <https://github.com/psu-psychology/psych-260>

BrainFacts.org from The Society for Neuroscience: <http://www.brainfacts.org>

Outlines

These outlines are a convenient way to organize and review some of the course material. You are not expected to know every detail on the outlines for this course.

- [Levels of analysis outline](#)
- [Neuroanatomy outline](#)
- [Cellular outline](#)
- [Neurotransmission outline](#)

Note: If the reading assignment says 'W&B 1:2-19' that means read the Watson and Breedlove text Chapter 1, pages 2 through 19.

Schedule

[PSU Academic Calendar](#)

Week 01, January 11-15

Tue, January 11

- Topic
 - Introduction to the course, history of neuroscience
 - Lecture notes: [HTML](#), [RMarkdown](#).
- Assignment
 - Read W&B 1:2-19. <http://www.columbia.edu/cu/psychology/courses/1010/mangels/neuro/history/history.html>.
 - Scan <https://faculty.washington.edu/chudler/hist.html>

Thu, January 13

- Topic
 - Levels of analysis; neuroscience methods I
 - Lecture notes: [HTML](#), [RMarkdown](#).
- Assignments
 - Review W&B 2:24.
 - Read [Levels of analysis outline](#).
 - Optional
 - [Grillner, Kozlov, Kotaleski \(2005\)](#).

Week 02, January 18-22

Tue, January 19

- Topic
 - Methods to the madness, Neuroanatomy I
- Assignment
 - Read: W&B 2:42-47; 3:50-54; 3:69-73.
 - Optional:
 - https://en.wikibooks.org/wiki/Cognitive_Psychology_and_Cognitive_Neuroscience/Behavioural_and_Neuroscience_Methods.

Thu, January 21

- Topic
 - Neuroanatomy II.
- Assignment
 - Read W&B: 2:29-42.
 - [Neuroanatomy outline](#)

Week 03, January 25-29

Tue, January 26

- Topic

- Neuroanatomy Lab.
- [Neuroanatomy outline](#)

Thu, January 28

NO CLASS

Week 04, February 1-5

Tue, February 2

- Topic
 - **Quiz 1**
 - Cells of the nervous system.
- Assignment
 - Read W&B: 2:22-29.
 - [Cellular outline](#)

Thu, February 4

- Topic
 - Neurophysiology I.
- Assignment
 - Read W&B 3:48-54.

Week 05, February 8-12

Tue, February 9

- Topic
 - Neurophysiology II.
- Assignment
 - Read W&B 3:54-69

Thu, February 11

- Topics
 - Neurophysiology III.
 - Exam 1 review.
- Assignment
 - Read W&B 1:19, 2:46-47, 3:73.

Week 06, February 15-19

Tue, February 16

- Topics
 - **Exam 1**

Thu, February 18

- Topic
 - Neurochemistry I.
- Assignment
 - Read W&B 4:76-82.
 - [Neurotransmission outline](#)

Week 07, February 22-26

Tue, February 23

- Topic
 - Neurochemistry II.
 - Hormones and the brain.
- Assignment
 - Read W&B 4:82-99, 8:202-222.
 - [Neurotransmission outline](#)

Thursday, February 25

- Topics
 - Hormones and the brain
 - **Quiz 2.**
 - Exam 1 returned.

Week 08, February 29 - March 4

Tue, March 1

- Topic
 - Evolution of the human brain.
- Assignment
 - Read [Hofman 2014](#).

Thu, March 3

- Topic
 - From evolution to development.
 - Exam 2 review
- Assignment
 - Read W&B 13:387-392.

Week 09, March 7-11

Spring Break -- NO CLASS

Week 10, March 14-18

Tue, March 15

- Topic
 - **Exam 2**

Thu, March 17

- Topic
 - Emotion, Fear, and Stress
- Assignment
 - Read W&B 11:302-324.

Week 11, March 21-25

Tue, March 22

- Topic
 - Psychopathology I.
- Assignment
 - Read W&B 12:326-340.

Thu, March 24

- Topic
 - Psychopathology II.
- Assignment
 - Read W&B 12:340-352.

Week 12, March 28 - April 1

Tue, March 29

- Topics
 - **Quiz 3**
 - Exam 2 returned.
 - Sensory systems.
- Assignment
 - Read W&B 5:106-114.

Thu, March 30

- Topic
 - Somatosensation.
- Assignment
 - Read W&B 5:114-122.

Week 13, April 4-8

Tue, April 5

- Topic
 - Action
- Assignment
 - Read W&B 5:122-138

Thu, April 7

- Topic
 - Audition.
- Assignment
 - Read W&B 6:140-156.

Week 14, April 11-15

Tue, April 12

- Topic
 - Vision I.
- Assignment
 - Read W&B 7:168-180.

Thu, April 14

- Topic
 - Vision II.
 - Exam 3 review
- Assignment
 - Read W&B 7:180-201.

Week 15, April 18-22

Tue, April 19

- Topic
 - **Exam 3**

Thu, April 21

- Topic
 - Learning & memory.
- Assignment
 - Read W&B 13:354-370.
 - **Papers and blog posts due**

Week 16, April 25-29

Tue, April 26

- Topic
 - **Quiz 4**
 - Learning and Memory II
- Assignment
 - Read W&B 13:370-379.

Thu, April 28

- Topic
 - Review for Exam 4
 - The Cerebral Symphony

Week 17, May 2-6

FINAL EXAM TBA

Evaluation

Elements

Component	Description	Points
Exams	There will be three (3) in-class examinations, plus a final held during the exam period that is partially cumulative. Each exam is worth 40 points. The top 3 of 4 exam scores will count toward your final grade. You may choose not to take the final.	120
Quizzes	There will be four (4) in-class quizzes. Each quiz is worth 10 points. The top 3 of 4 quiz scores will count toward your final grade.	30
Participation	There are a total of 15 points available by completing either a paper or blog assignment.	15
<i>Blog</i>	You are encouraged to create and maintain a neuroscience-related blog on PSU's blog server, http://sites.psu.edu . You may create up to 3 posts and earn 5 points/post, for a total of 15 possible points. Assignment	
<i>Paper</i>	You may write a 3-5 pp (double-spaced) news-style paper on a topic related to biological psychology. The paper is worth 15 points. Assignment	
	TOTAL POINTS POSSIBLE	165
Extra Credit	There may be extra credit opportunities provided at random and unannounced times during the semester. Come to class in order to benefit from them.	

[Data about recent performance](#)

Grading Scheme

Points	Percent	Grade
165+	100+	A+
155-164	94-99	A
148-154	90-93	A-
143-147	87-89	B+
139-142	84-86	B
132-138	80-83	B-
127-131	77-79	C+
115-126	70-76	C
99-114	60-69	D
0-98	<59	F

Policies

Academic Integrity

It is your responsibility to maintain high standards of academic integrity. If you cheat on any assignment, copy the work of another student, or quote a published source without attribution, you may receive an F for the assignment or be subject to other penalties, as well. If you do not know what constitutes cheating or plagiarism, see the instructor or your TA.

Late, missed or make-up assignments

Exams

Make-up exams may be permitted under unusual circumstances such as (a) an interview for graduate school or a job, (b) illness, (c) religious observance, (d) the death of a family member, or (e) any other event recognized by the university as a valid excuse for absence from class.

If you must miss class on the day an exam is scheduled, you must do the following:

1. Contact the TA or the instructor by telephone, email, or in person in advance of the exam. Twenty-four hours notice is expected. If

you do not contact the TA or instructor in advance, it is possible that you may not be able to schedule a make-up exam.

2. Arrange with the TA or instructor to take a make-up exam as soon as possible, but no later than one (1) week following the date of the scheduled exam. It is your responsibility, not the TA's or the instructor's to schedule an approved make-up exam in a timely way.

Quizzes

No make-up quizzes will be given. You may ask for a copy of the quiz for studying purposes, however.

Accommodation for persons with disabilities

The Pennsylvania State University encourages qualified persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation in this course or have questions about physical access, please contact the instructor as soon as possible.