

NSB-PSY 618: Behavioral and Cognitive Neuroscience | Spring 2020

<i>Instructors:</i>	Professors David Moorman and Rosie Cowell
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<i>Moodle page:</i>	https://moodle.umass.edu/course/
<i>Office hours:</i>	Moorman: Thu 10-11am Cowell: Mon 10-11am
<i>Class location & time:</i>	Tue/Thu 2.30-3.45pm, Morrill I Room 444
<i>Lab location & time</i>	Wed 10am-12pm, ISB 264 (unless otherwise stated)

The instructors reserve the right to make minor modifications to this syllabus at any time.

Class Information and Communication

This syllabus provides basic information about the course. There is also a course Moodle page, which you must check regularly. The Moodle page will provide information about assigned readings and other activities. This syllabus can be downloaded from the Moodle page.

The best way to contact the instructors is to email us or stop by during office hours. If you would like an in-person meeting outside of office hours, please email to arrange.

Readings

Reading assignments for each class are listed on Moodle. Please read all assignments before class.

For class:

- *Neuroscience, 6th Ed.*, Purves et al. (Sinauer, Oxford University Press). Required.
- Other selected journal articles and book chapters (provided on Moodle).

For lab:

- *The Sheep Brain: A Photographic Series, Second Edition*, by Vanderwolf and Cooley, ISBN: 0-920700-03-9. Very much optional. Online resources will be provided instead, but if you can borrow or otherwise procure a copy of this, it will come in handy.
- Other selected journal articles and book chapters (provided on Moodle).

Grade Composition

Your course total (and associated grade) will be based upon the following components:

1. Four Exams, 20% each (total of 80%)
2. Participation in Labs, divided equally over 13 labs, dropping the lowest (total of 12%)
3. Neuroanatomy Assignment (total of 2%)
4. Practice In-Class Exam Question (total of 2%)
5. Practice Take-Home Exam Question (total of 2%)
6. Spontaneous Reading Quizzes (total of 2%)

There are no opportunities for extra credit, e.g., participation in SONA will not add to your grade. The spontaneous reading quizzes will be administered in some but not all classes, and will be based upon the material covered in the readings.

Exams

- There will be two Take-home Exams and two In-class Exams. Each exam is weighted equally.
- In-class exams are multiple choice; each take-home exam is a set of short essays.
- Three exam dates are listed in the Class Schedule below, the fourth will be during finals week.
- Exams will cover both material from class and material from the assigned readings.
- Each exam may cover all material assigned or presented up to that date, including material that may have been tested on previous exams. However, on any given exam, previously *untested* material will be weighted more strongly.
- For the Take-Home exams, your written answers will be submitted via TurnItIn on Moodle. It is an open-book exam, so written sources may be consulted, but be careful to avoid plagiarism (see below). You must not communicate with anyone else about your answers to the exam until after you have turned it in.

Grading Scale

A	A-	B+	B	B-	C+	C	C-	D+	D	F
93-100	90-93	85-90	80-85	75-80	70-75	65-70	60-65	55-60	50-55	0-50
Your final score will be totaled over all assignments then rounded to the nearest integer value before translating to a letter grade.										

Plagiarism – very important!

Plagiarism will be taken extremely seriously in this class, and should be avoided at all costs.

Please read this website from Indiana University, which gives excellent examples of plagiarism: <https://wts.indiana.edu/writing-guides/plagiarism.html>

Please also ***read the University's academic honesty policy***, available online at: <http://www.umass.edu/honesty/>

Academic Honesty

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students

are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent (http://www.umass.edu/dean_students/codeofconduct/acadhonesty/).

Disabilities

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

SEE PAGES 4 & 5 FOR CLASS SCHEDULE

Class and Lab Schedule (tentative)

Class #	Date	Topic	Instructor	Notes
1	Tu 21 Jan	Welcome and Introduction	Cowell	
Lab1	W 22 Jan	Sheep Brain Dissection I	Moorman	NeuroAnat Qu given
2	Th 23 Jan	Somatosensation	Cowell	
3	Tu 28 Jan	Pain	Cowell	
Lab2	W 29 Jan	Sheep Brain Dissection II	Moorman	NeuroAnat Qu due
4	Th 30 Jan	Smell and Taste	Moorman	
5	Tu 4 Feb	Vision: Eye and Brain	Cowell	Practice In-class Qu
Lab3	W 5 Feb	Sheep Brain Dissection III	Moorman	
6	Th 6 Feb	Hearing: Ear and Brain	Cowell	Practice In-Class due
7	Tu 11 Feb	Lower Motor	Moorman	
Lab4	W 12 Feb	Histology	Moorman	
8	Th 13 Feb	In-class Exam 1	-	Mult. Choice/Short Ans.
-	Tu 18 Feb	NO CLASS – Monday Schedule		
Lab5	W 19 Feb	Light Microscopy Core Visit	Guest	
9	Th 20 Feb	Upper Motor	Moorman	
10	Tu 25 Feb	Basal Ganglia	Moorman	
Lab6	W 26 Feb	Motor Control	Guest	TBC
11	Th 27 Feb	Visceral Motor	Moorman	Practice Take-home Qu
12	Tu 3 Mar	Visual Perception	Cowell	Prac. Take-home due
Lab7	W 4 Mar	Animal Models	Moorman	Tobin 521B
13	Th 5 Mar	Attention	Cowell	
14	Tu 10 Mar	High-Level Vision	Cowell	Take-home Exam 1
Lab8	W 11 Mar	Eye-tracking	Guest (Staub)	Tobin 2 nd floor
15	Th 12 Mar	Speech and Language	Cowell	
Spring Break				
16	Tu 24 Mar	Memory and Synaptic Plasticity I	Moorman	Take-home 1 due
Lab9	W 25 Mar	Computational Models	Cowell	Tobin 521B
17	Th 26 Mar	Memory and Synaptic Plasticity II	Moorman	
18	Tu 31 Mar	Human Memory	Cowell	
Lab10	W 1 Apr	Memory Paradigms	Cowell	Tobin 521B
19	Th 2 Apr	Memory and Spatial Cognition	Cowell	
20	Tu 7 Apr	Sleep and Wakefulness	Moorman	Take-home Exam 2

Lab11	W 8 Apr	Visit to MRI Scanner	Cowell	HMRC, in LSL
21	Th 9 Apr	Disorders of Cognition	Cowell	
22	Tu 14 Apr	Reproductive Behavior	Moorman	Take-home 2 due
Lab12	W 15 Apr	EEG and ERP	Guest	Tobin 521B
23	Th 16 Apr	Maternal Behavior	Moorman	
24	Tu 21 Apr	Emotions (fear)	Moorman	
-	W 22 Apr	No Lab - Monday schedule		
25	Th 23 Apr	Emotions (reward)	Moorman	
26	Tu 28 Apr	Review/Loose Ends	M & C	
Lab13	W 29 Apr	<i>What is Cognitive Neuroscience?</i>	M & C	Tobin 521B
Finals Week		Final Exam	-	Mult. Choice/Short Ans.