

Syllabus
NROSCI 1027-1160
Topics in Neuroscience
(Neuroscience Proseminar)
Spring 2016, Class # 23953

LECTURES: Wednesdays, Friday, 3-3.50 pm, A202 Langley Hall

INSTRUCTOR: Dr. Nadya Povysheva
Department of Neuroscience
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Office Hours: by appointment (through Email)

COURSE WEB SITE: <http://courseweb.pitt.edu>

Course Description

This course is based on discussion of various research topics in neuroscience. Neuroscience graduate students, postdoctoral fellows, and faculty will present an overview of their research topic and initiate discussion of research articles on that topic. Critical analysis of experimental results is emphasized. In the second part of this course, the students will present research articles of their choice to the class. There is no required text for this course.

Class Format:

This class is meant to be an informal discussion where you have the opportunity to learn through a conversation with the speakers about the research techniques and projects going on in their laboratory. I encourage you to raise any questions and/or points of discussion during class. Presenters will provide paper(s) associated with their research; you are required to read these BEFORE CLASS. The articles will be posted on CourseWeb at least 5 days prior to the relevant presentation. You are also required to complete a summary sheet for each article (also available on CourseWeb) that is due at the beginning of each class. These summaries are designed to enhance your understanding of the material and will be graded pass/fail.

Classroom and Course Etiquette:

Turn off all cell phones and other electronic devices before class and put them away. Respectful conduct is expected at all times. To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

Blackboard:

Blackboard will be used in conjunction with this course (<http://courseweb.pitt.edu>). Please check Blackboard for: announcements, reading assignments, and article summary sheets. Reading assignments and article summary sheets will be posted in the "Course Documents" section.

Evaluation:

This course will be evaluated based on class attendance, participation, completion of summary worksheets, and a final 25-minute presentation of the article of your choice.

Each class is worth a maximum of 10 points. You get 4 points for attendance, 4 points for completing a summary worksheet of the article, and 2 points for participating. You cannot submit a worksheet to get the 4 points if you miss class.

1 class:

Attendance = 4 points

Attendance + participation = 6 points

Attendance + article summary = 8 points

Attendance + article summary + participation = 10 points

Attendance of the class is mandatory. You get three unexcused absences without any penalty. Attendance is monitored via a sign in sheet that is physically in class each day. That is the only way to get credit for attendance.

Article summaries are due at the beginning of class (no later than 3 pm). They will be graded pass/fail (you either get all 4 points, or do not). You will pass if your answers demonstrate a thorough reading of the article.

At the end, you will present the article of your choice. This presentation will include: 1) Introduction (the problem addressed, background literature and hypothesis), 2) Methods, 3) Results (figures) 4) Discussion and Critique, 5) Take home message. This will be 20-25 minutes long and is worth up to 100 points.

Final grade:

Attendance: Maximum 112 (4 points per class/28 classes)

Article summary: Maximum 100 (4 points per class/25 classes)

Participation: Maximum 50 (2 points per class/25 classes)

Your presentation: Maximum 100 points

Final Grade: (Attendance + Summaries + Participation + Presentation) / 300

Grading scale

<u>Numerical Avg.</u>	<u>Letter Grade</u>	<u>Numerical Avg.</u>	<u>Letter Grade</u>
98.0 – 100	A+	78.0 - 79.9	C+
93.0 - 97.9	A	73.0 - 77.9	C
90.0 - 92.9	A-	70.0 - 72.9	C-
88.0 - 89.9	B+	68.0 - 69.9	D+
83.0 - 87.9	B	63.0 - 67.9	D
80.0 - 82.9	B-	60.0 – 62.9	D-
		59.9 or less	F

Academic integrity:

Students are required to adhere to the College of Arts and Sciences academic integrity standards. See <http://www.as.pitt.edu/undergraduate/expectations/index.html> for details.

Disabilities and Special Needs:

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both me and Disability Resources and Services, 216 William Pitt Union, 412-648-7890 or 412-383-7355 (TTY) as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course. Please go to the Student Affairs website at <http://www.drs.pitt.edu/> for more information.

##	DATE	TOPIC/PRESENTER
1	January 6, Wed	Nadya Povysheva - Introduction: Asking questions, formulating hypotheses, designing experiments, analyzing results
2	January 8, Fri	Nadya Povysheva – Research article critique/review
3	January 13, Wed	Nadya Povysheva – "Role of NMDA receptors in vulnerability of neurons to ischemia"
4	January 15, Fri	Krystle Frahm – “The Blood-Brain Barrier within the Paraventricular Nucleus of the Hypothalamus”
5	January 20, Wed	Adam Large – “Shedding Light on Olfaction: Optogenetic Analysis of Piriform Cortex“
6	January 22, Fri	Lindsey Snyder - "Dynorphin acts as a neuromodulator to inhibit itch in the dorsal horn of the spinal cord"
7	January 27, Wed	Steve Meriney - “The development of drugs to treat muscle weakness based on a basic understanding of how synapses work”
8	January 29, Fri	April Dukes - "Real-time in vivo imaging to study mitochondrial dynamics in dopamine neurons"
9	February 3, Wed	Meredyth Wegener – “Dopamine neural activity in awake-behaving rodents”
10	February 5, Fri	Shawn Burton - "Division of Labor in Mammalian Olfaction: Investigating the Physiology of Mitral and Tufted Cells"
11	February 10, Wed	Laura Rupprecht – “The interrelationship between body weight and nicotine with a regulatory perspective”
12	February 12, Fri	Erin Kirschmann
13	February 17, Wed	Andreea Bostan – “Basal Ganglia Circuits with the Cerebral Cortex”
14	February 19, Fri	Megan Bertholomey -"Sex differences in alcohol-motivated behavior in rats: role of cues, stress, and estrogen"
15	February 24, Wed	Layla Banihashemi
16	February 26, Fri	Diana Olivos

17	March 2, Wed	Jared Moreines - "Disruption of Dopaminergic Tone in the Chronic Mild Stress Rodent Model of Depression"
18	March 4, Fri	Getting ready for your presentation
	March 9, Wed	<i>Spring Break</i>
	March 11, Fri	<i>Spring break</i>
19	March 16, Wed	Megan Brady – "Synaptic Localization of $\alpha 5$ GABA (A) Receptors via Gephyrin Interaction Regulates Dendritic Outgrowth and Spine Maturation"
20	March 18, Fri	Kevin Mastro – "Basal Ganglia: From Movement to Disease"
21	March 23, Wed	<i>Student presentations</i>
22	March 25, Fri	<i>Student presentations</i>
23	March 30, Wed	<i>Student presentations</i>
24	April 1, Fri	<i>Student presentations</i>
24	April 6, Wed	<i>Student presentations</i>
25	April 8, Fri	<i>Student presentations</i>
26	April 13, Wed	<i>Student presentations</i>
27	April 15, Fri	<i>Student presentations</i>
28	April 20, Wed	<i>Student presentations</i>
29	April 22, Fri	<i>Student presentations</i>