Systems and Behavioral Neuroscience (BC 1117 and 1119)
Spring 2009 Dr. Russell Romeo Monday and Wednesday 4:10-5:25pm
Office Hours: 2-4 Tuesday, Office: Milbank Rm. 415B
rromeo@barnard.edu Phone: (212) 854-5903

Readings: **Breedlove, Rosenzweig and Watson 2007** (5th Edition). **Biological Psychology: An Introduction to Behavioral, Cognitive, and Clinical Neuroscience, Sinauer Associates, Inc.**

Grades: (BC1117)	Grades: (BC1119)
Exam #1 = 20%	Exam #1 = 30%
Exam #2 = 20%	Exam #2 = 30%
Exam #3 = 30%	Exam #3 = 40%
Laboratory = 30%	

Schedule:	Reading:	Dates:	Topics:
Week 1		(1/21)	**Introduction**
Week 2	**CH 1**	(1/26)	**Scope and History of Behavioral Neuroscience**
	Appendix	(1/28)	**Behavioral Neuroscience Methods**
Week 3	**CH 2**	(2/2)	**Neuroanatomy**
		(2/4)	**Neuroanatomy (*continued*)**
Week 4	**CH 3**	(2/9)	**Neurophysiology**
		(2/11)	**Neurophysiology (*continued*)**
Week 5	**CH 4**	(2/16)	**Neurochemistry and Synaptic Transmission**
		(2/18)	**Neurochemistry and Synaptic Transmission (*continued*)**
Week 6		(2/23)	**Neuropharmacology and Q&A**
		(2/25)	**EXAM #1**
Week 7	**CH 6***(161-172)*	(3/2)	**Comparative Anatomy and Development**
	CH 7*(181-198; 206-210)*	(3/4)	**Comparative Anatomy and Development (*continued*)**
Week 8	**CH 8**	(3/9)	**Sensory Processing, Touch and Pain**
	CH 9	(3/11)	**Hearing, Taste and Smell**
Week 9	**CH 10***(285-300)*	(3/23)	**Vision**
		(3/25)	**Vision (*continued*) and Q & A**
Week 10		(3/30)	**EXAM #2**
	CH 13	(4/1)	**Homeostasis: Temperature and Fluid Regulation**
Week 11		(4/6)	**Homeostasis: Energy Regulation**
	CH 14*(419-432)*	(4/8)	**Biological Rhythms**
Week 12	**CH 12***(360-384)*	(4/13)	**Sexual Behavior**
	CH 15*(451-454;460-464)*	(4/15)	**Emotions, Aggression and Stress**
Week 13	**CH 17***(513-531)*	(4/20)	**Learning and Memory**
	CH 18*(543-557)*	(4/22)	**Learning and Memory (*continued*)**
Week 14	**CH 16**	(4/27)	**Biological Basis of Behavioral Disorders**
		(4/29)	**Biological Basis of Behavioral Disorders (*continued*)**
Week 15		(5/4)	**Course Summary and Q&A**
		TBA	**EXAM #3**

Systems and Behavioral Neuroscience with Laboratory (BC 1117)
Barnard College, Spring 2009

Lecturer: Professor Russell Romeo
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or by appointment

Lab Instructor: Professor Kara Pham
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Office: 415L Milbank
Office hours: Wednesdays 1-3 p.m.
or by appointment

Week	Dates	Room	Topics	Readings	Assignments
1	Jan. 20 Jan. 23		First week of classes: no labs this week		
2	Jan. 27 Jan. 30	1115 Altschul	Introduction to Lab Using Animals in Research		
3	Feb. 3 Feb. 6	1115 Altschul	Sheep Brain Neuroanatomy, Wet Lab Part 1		
4	Feb. 10 Feb. 13	1115 Altschul	Sheep Brain Neuroanatomy, Wet Lab Part 2		
5	Feb. 17 Feb. 20	1115 Altschul	Sheep Brain Neuroanatomy Exam		
6	Feb. 24 Feb. 27	410 Milbank	Stimulants and Locomotion, Introduction and Discussion Injection and Open Field Behavior, Dose 1	Articles #1 and #2	Introduction (Due Week 7)
7	Mar. 3 Mar. 6	410 Milbank	Stimulants and Locomotion Injection and Open Field Behavior, Dose 2		Methods (Due Week 8)
8	Mar. 10 Mar. 13	410 Milbank	Stimulants and Locomotion Injection and Open Field Behavior, Dose 3		Results/Graphs (Due Week 10)
9	Mar. 17 Mar. 20		Spring break: no labs this week		
10	Mar. 24 Mar. 27	410 Milbank	Female Reproductive Behavior, Introduction and Discussion Scoring Mating Behavior	Article #3	
11	Mar. 31 Apr. 3	410 Milbank	Female Reproductive Behavior Mating Behavior Test		
12	Apr. 7 Apr. 10		Passover; no labs this week		
13	Apr. 14 Apr. 17	1013 Altschul	Female Reproductive Behavior (Half of Students) Microscopy, Progesterone Receptor Quantification		
14	Apr. 21 Apr. 24	1013 Altschul	Female Reproductive Behavior (Half of Students) Microscopy, Progesterone Receptor Quantification		Full Lab Report (Due Week 15)
15	Apr. 28 May 1	410 Milbank	Course Summary Laboratory Report on Female Reproductive Behavior is Due		

Grades:
Sheep Brain Neuroanatomy Exam = 25%
Introduction, Stimulants and Locomotion = 10%
Methods, Stimulants and Locomotion = 10%
Results/Graphs, Stimulants and Locomotion = 15%
Laboratory Report, Female Reproductive Behavior = 40%
*The lab grade is worth 30% of your total grade for the course.

Readings:
Article #1: Fisone, G. et al. (2004). Caffeine as a psychomotor stimulant: mechanism of action. Cellular and Molecular Life Sciences, 61:857-872.
Article #2: Antoniou, K. et al. (2005). A detailed behavioral analysis of the acute motor effects of caffeine in the rat: involvement of adenosine A_1 and A_{2A} receptors. Psychopharmacology, 183:154-162.
Article #3: Mong, J.A. and Pfaff, D.W. (2004). Hormonal symphony: steroid orchestration of gene modules for sociosexual behaviors. Molecular Psychiatry, 9:550-556.

Class Policies:
Exams: All exams are multiple choice and non-cumulative. Exam questions will be drawn from both lectures and assigned readings.

IMPORTANT: On exam days, **once the first exam is handed in, no more exams will be handed out.** Therefore, please be punctual on exam days. All students should begin work on exams at the same time; a student who is late may not have extra time.

Exam Make-up: In the event of health or family emergency, please contact me immediately (phone or email). If health-related, a doctor's excuse will be required. A make-up exam in a slightly different format than the in-class exam (multiple choice, short answer, matching, short essay) will be administered during my office hours.

Academic Burden: Academic burden (i.e., more than 3 exams in 24h period) can only be declared for the final exam (not Exams 1 and 2).

Attendance: Attendance is highly recommended, though not mandatory. As a courtesy to the professor and fellow students, please be punctual.

Grading and Grade Scale: Exams will not be graded on a curve. The grading scale is as follows: 100-97 = A+; 96.9-93 = A; 92.9-90 = A-; 89.9-87 = B+; 86.9-83 = B; 82.9-80 = B-; 79.9-77 = C+; 76.9-73 = C; 72.9-70 = C-; 69.9-60 = D; 59.9-0 = F

CourseWorks: Some class materials (and grade postings) will be made available on CourseWorks (https://courseworks.columbia.edu). Only figures, drawings, and diagrams will made available. My **lecture notes WILL NOT be posted** on CourseWorks.