

Mind, Brain and Behavior
Columbia University, Fall 2011
Dr. Katherine Nautiyal

Psychology W1010

Tuesday/Thursday 6:10-7:25pm

501 Schermerhorn Hall

Instructor:

Katherine Nautiyal, PhD; email: kmn2116@columbia.edu

Office hours: Schermerhorn 356, Tuesdays 4-6 and by appointment

Teaching Assistants:

Bryan Denny, Rebecca Martin, Mary Shorey, Arielle Radin

Email for all TAs: MBB2011TAs@gmail.com

Office hours: TBD

Course Description:

This course will provide a broad introduction to neuroscience, cognition and biological psychology. We will start with an overview of the brain and the basics of how it works and how it gets information by receiving and processing sensory stimuli. Next we will cover how some simple and complex behaviors are regulated, for example movement, feeding and sex. Finally we will examine cognition and some higher order functioning such as learning, memory, attention and language.

Readings and Lectures:

-The required textbook for this course is Biological Psychology (6th Edition), by S. Marc Breedlove, Neil V. Watson and Mark R. Rosenzweig. Additional readings for some topics will be provided as needed, on Courseworks. Optional readings from the primary literature will provide extra information on some topics and studies.

-Powerpoint files of slide shows used in class will be provided before the lecture on Courseworks, when possible. Please note that these slides do not contain all lecture material that you will be responsible for.

Method of Evaluation:

-Midterm (100 pts) and Final (100 pts) Exams

-2 Optional in-class self-tests (50 pts each)

-Experiment participation extra-credit (max 6 pts)

The midterm and final exams will be comprised of multiple choice, fill-in the blanks and short essay questions. They will each be worth 50% of your term grade. Exams will not be “curved” but final term grades will be assigned based on the distribution of numerical grades.

Optional in-class self tests will be 40 minute long quizzes designed to keep you up-to-date on material. They are like “grade insurance” and completely optional. Doing poorly on these self tests can NOT hurt your grade. They can only help your grade by boosting your midterm and final exam grades. If your self test grade 1 is better than half of your midterm grade, it will replace half of your midterm grade. If your self test 2 grade is better than half of your final grade, it will replace half of your final grade. For example, if you earned 50/50 on self test 1 and 80/100 on the midterm, your midterm grade would be replaced with a 90/100. [i.e. $(0.5)(80)+50$]. But if you earned a 25/50 on self test 1 and 80/100 on the midterm, your midterm grade would remain 80/100.

You may earn extra credit points to be added onto your final term grade by participating in experiments run by researchers in the department. A total of 6 extra credit points will likely bump you up to the next letter grade increment. There is one exception to this rule – these extra credit points will not increment your grade from an A to an A+. The few A+s that are earned are done so based on coursework only.

PRELIMINARY Course Schedule:

Date	Topic	Reading
Sept 6	Introduction	
Sept 8	The Basics of the Brain as an Organ	Part of Chapter 2 (pg 23-50)
Sept 13	Neuronal Signaling I	Beginning of Chapter 3 (57-68)
Sept 15	Neuronal Signaling II	End of Chapter 3 (67-85) Beginning of Chapter 4 (87-94)
Sept 20	Genes and Environment	Appendix (A1-A2)
Sept 22	Methods to Assess and Study the Brain	Part of Chapter 2 (pg 50-55) Box 2.1 (pg 28-29)
Sept 27	Self-test 1 (optional) Intro to Perception: Touch, Pain	Chapter 8 (215-239)
Sept 29	Perception: Taste, Smell	Chapter 9 (268-280)
Oct 4	Perception: Audition	Chapter 9 (247-268)
Oct 6	Perception: Vision	Chapter 10 (281-315)
Oct 11	Higher Perceptual Functions & Motor	Chapter 11 (317-348)
Oct 13	Philosophy of the Mind	TBD
Oct 18	Midterm Exam	Review Sessions (Oct 13 & Oct 17)
Oct 20	Hormones and Behavior	Chapter 5 (117-147)
Oct 25	Stress	Chapter 5 (117-147) Part of Chapter 15 (pg 467-475)
Oct 27	Feeding	Part of Chapter 13 (pg 396-412)
Nov 1	Rhythms and Sleep Guest Lecture: Dr. Karatsoreos	Chapter 14 (413-442)
Nov 3	Self-test 2 (optional) Language	Chapter 19
Nov 8	No Class, University Holiday	Don't forget to vote!
Nov 10	Emotions and their Regulation Guest Lecture: Bryan Denny	Part of Chapter 15 (pg 445-464)
Nov 15	Behavioral and Psychiatric Disorders	Chapter 16 (pg 477-508)
Nov 17	Social and Sex Behavior: Affiliation	TBD
Nov 22	Social Behavior: Aggression	TBD
Nov 24	No Class, University Holiday	Happy Thanksgiving!
Nov 28	Learning and Memory	Chapter 17 (pg 511-547)
Dec 1	Attention and Higher Cognition	Chapter 18 (pgs 549-582)
Dec 6	Drugs	End of Chapter 4 (pg 94-116)
Dec 8	Neuroplasticity & Recap	Afterword (pg 619-624)
Dec 20	Tentative FINAL EXAM (Determined by University Schedule)	Review sessions TBD

