

COLUMBIA UNIVERSITY
PSYC S2450Q BEHAVIORAL NEUROSCIENCE
Summer 2019 Syllabus
Mon & Wed 1:00p - 4:10p at TBA

Instructor: Elif Aysimi Duman

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Office hour: Wed 12-1p (Location TBA)

Course description and learning objectives:

The aim of this course is to introduce the fundamental topics in neuroscience and their relation with behavior and psychological disorders through research findings from various fields such as psychology, pharmacology, physiology and genetics. We will start with the fundamentals of genetics and neuroscience, and move towards more specific topics such as neuroendocrine systems, vision, stress, learning and memory.

Prerequisites: A course in psychology and basic knowledge of chemistry and biology are recommended.

Course readings:

Textbook: Carlson, N. R. & Birkett, M. A. (2016). *Physiology of Behavior*, 12th Edition. Boston: Pearson.

Textbook is available at Book Culture. We will go over assigned book chapters and journal articles for each week. Please follow up on these assignments on Courseworks. Supplemental readings will be assigned throughout the semester. A brief summary of the lecture slides will be posted Wednesdays after class on Courseworks.

Course format, policies and grading:

First few weeks of the course will be devoted to a general introduction to genetics, epigenetics and neuroscience together with relevant research methods. During this period, we will have in-class activities to make sure the material is understood. At the end of this section, we will have a midterm on July 29 (35%). Afterwards, we will go over specific topics each week. During this period, we will cover the basics of each topic followed by discussion of relevant journal articles. Participation in class discussions and activities and completing assignments on time are worth 20% of your grade. Late assignments will not be accepted. Attendance in class is mandatory according to Columbia University rules. During in-class activities, in order to receive full credit, students have to be present for the activity from the beginning till the end. All assignments will be checked for plagiarism. Exams will consist of different types of questions, such as multiple choice and short essays. Excuse exams for the midterm will only be considered if a legitimate excuse (eg. Doctor's report) is submitted in writing within 3 days following the exam. Final exam will cover all the topics of the semester, with more emphasis given to topics after the midterm exam. There will be no excuse exam for the final. If you require any arrangement for a disability, please inform me and Office for Disability Services at the beginning of the semester to accommodate the necessary arrangements.

Participation, in-class activities, assignments	20%
Midterm exam	35%
Final exam	45%

PSYC S2450Q BEHAVIORAL NEUROSCIENCE**TENTATIVE COURSE SCHEDULE***

Week	Date (dd/m)	Content
1	08/7	Course introduction Introduction to Genes, Brain & Behavior: Genetics
	10/7	Introduction to Genes, Brain & Behavior: Epigenetics
2	15/7	Neuroanatomy & Neurophysiology
	17/7	Neuroanatomy & Neurophysiology
3	22/7	Nervous system & Neuroscience methods
	24/7	Sensory systems: Vision
4	29/7	Midterm exam
	31/7	Stress: neuroendocrine, immune and circadian interactions
5	05/8	Stress: neuroendocrine, immune and circadian interactions
	07/8	Learning & Memory
6	12/8	Learning & Memory Wrap-up
	14/8	Final exam
* Schedule is subject to change anytime during the semester.		