

MCB 63: Introduction to Functional Neuroanatomy

Instructor: Arash Ng, PhD

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Office: 4015 Valley Life Science Building

Office hours: Fri 10-11 am VLSB 4051

Course Hours: M/Tu/W: 10am – 12:00pm, Th: 10-11:30am

Room: Moffitt Library 145

Textbook:

No textbook is required. Recommended textbook: *The Brain, An introduction to functional neuroanatomy* by Charles Watson, Matthew Kirkcaldie and George Paxinos. ISBN: 978-0-12-373889-9.

Course description:

This course emphasizes beginning anatomy of the brain and spinal cord to individuals interested in understanding the dynamics of motor and sensory functions in the human body. Students in the Departments of Education, Psychology, and Integrative Biology, as well as students interested in medicine and the life sciences are especially encouraged to attend. There are no prerequisites for this course, but a basic understanding of high school chemistry and biology is assumed.

Attendance:

Attendance is mandatory.

Grading:

Midterm I	75 pts
Midterm II	75 pts
Final Exam	150 pts
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Total	300 pts

Midterms:

The format will be matching, true/false and multiple choice and identification of elements in illustrations/figures. The midterm will be based on material covered up to the lecture just preceding the exam. These exams are designed to test retention and integrative skills.

Terminology in anatomy: You will be introduced to many new terms and words that are needed to learn the functional anatomy of the nervous system. You must learn to speak and think in the language of anatomy. Practice is key to learning a new language and the more you immerse yourself in the language the better you'll get at it. In this course, we will learn the origins of some of the terms which will make it easier to recall and more interesting.

Tentative grade scale:

Above 95%	=	A+
91% to 95%	=	A
87% to 89.9%	=	A-
85% to 86.9%	=	B+
80% to 84.9%	=	B
78% to 79.9%	=	B-
75% to 77.9%	=	C+
70% to 74.9%	=	C
67% to 69.9%	=	C-
65% to 66.9%	=	D+
60% to 64.9%	=	D
Lower than 60	=	F

Grade Status:

A student may take this course for a letter grade (A, B, C, D, F) or for Credit (A, B, or C)/ No Credit (D, F). A letter grade is the default status.

If the student elects CR/NCR status, the student must file the proper forms with Admissions and Records. According to college regulations a student may be assigned a final course grade of “Incomplete” if and only if you (a) miss the final for valid reasons; (b) have completed all other work with a grade of C or higher; and (c) have made prior arrangements with the instructor. The “Incomplete” must be completed within the first month of the next semester of college attendance.

Student Conduct:

General: You are expected to know and observe the “Rules of Student Conduct”, found in the UCB Catalog. Please treat everyone with respect.

Cheating: I have an expectation that students here at UC Berkeley adhere to strict ethics in regards to plagiarism and cheating. I have a zero-tolerance policy for cheating. This means no use of any aids, such as cheat sheets, electronic devices, organized cheating (gestures or signals), unauthorized obtainment of exams, computer hacking, or any other method. I understand that I or the GSIs cannot foresee every instance of cheating that may come up. So, this is my cover all warning: do not cheat in any way. Cheating will result in a zero on the assignment/exam and a referral to student judicial affairs or other disciplinary body.

Schedule of Lectures and Exams

Date	Topic
Mon 7/8	History of Neuroscience and Overview of Neuroanatomy
Tue 7/9	Cell Biology and Physiology of Neurons
Wed 7/10	Nervous System Development and Spinal cord organization
Thu 7/11	Somatic sensation and Pain
Mon 7/15	Vision
Tue 7/16	Audition and the Chemical senses
Wed 7/17	Catch Up and Review Session
Thu 7/18	Midterm I
Mon 7/22	Motor Neuron Circuits and Motor Control
Tue 7/23	Cranial Nerves and the Vestibular System
Wed 7/24	Cerebellum and Motor Learning
Thu 7/25	Basal nuclei
Mon 7/29	Autonomic Nervous system
Tue 7/30	Chemical Neuroanatomy NS Modulation of Mood
Wed 7/31	Amygdala and Limbic System
Thu 8/1	Midterm II
Mon 8/5	Hippocampus, learning and memory
Tue 8/6	Neocortex, laminar and Columnar Organization
Wed 8/7	Neuropathology
Thu 8/8	Language
Mon 8/12	Thalamus – the sensory and motor relay
Tue 8/13	Behavior and consciousness
Wed 8/14	Review Session
Thu 8/15	Final Exam