

MCB 63: Introduction to Functional Neuroanatomy

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Course Hours: MTuW: 10am – 12:00pm, Th: 10-11:30am

Room: 106 Stanley Hall

Textbook: No textbook is required but if you desire a textbook, *The Brain, An introduction to functional neuroanatomy* by Charles Watson, Matthew Kinkcaldie and George Paxinos. ISBN: 978-0-12-373889-9. It's inexpensive and concise. My lecture pdf files will be available a week ahead of time (posted to bCourses) and will serve as your primary reference material.

Course description:

This course is an introduction to the nervous system with a neuroanatomical emphasis. It is intended for non-bioscience majors who want a broad survey of the relationship between brain structure, cognitive function and behavior. Students with interests in health care, psychology, cognitive science, nursing, physical therapy, human biodynamics, and athletes associated with university sports are encouraged to attend. There are no course prerequisites but *there is an assumption that you have had at least a high school course in chemistry.*

Attendance:

Attendance is mandatory for the completion of the course. Upon entering the class all cell phones, and any musical devices will be switched off. Recording the lecture is permitted. *If you have any special consideration that I as an instructor should be aware of please do not hesitate to inform me.*

Evaluation of Student Performance:

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

Midterms: Midterm I will cover the first 2 weeks of lecture material. Midterm II will cover the second two weeks. 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. Sample questions will be posted before the first exam to familiarize students with the question construction.

Final exam: is cumulative and covers the entire course but is weighted to weeks 5 and 6.

Anatomy is like a foreign language: This course is at its core, anatomy – and anatomy is like a foreign language. I approach it accordingly. I stress the acquisition and mastery of the terminology and vocabulary – the new terms and words you will need to integrate into your intellectual matrix. I will give you tips about the origins of many of the terms so you have more ways to recall their meaning.

Reading: The textbook is suggested but not required. Each week’s lecture pdfs will be posted on bCourses the weekend BEFORE class.

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. Your behavior in lectures must not infringe the personal rights of other students, adversely affect their physical or mental health and safety; or result in an atmosphere not conducive to learning. In other words, **BE COURTEOUS TO YOUR FELLOW STUDENTS.**

Cheating: As a preface, I have not found cheating to be prevalent here at Berkeley. Having said that, the rules are self-evident: no aids of any kind (paper or electronic) can be used during exams. During quizzes and exams, cell phones must be stowed appropriately and NOT kept on your person or on your desk. Reading answers off another student’s exam is of course, forbidden. Any violation of these rules will be regarded as cheating and will result in an automatic grade of “F” for that examination. *In addition, it will dishearten and demoralize your instructor and we don’t want that to happen.*

Schedule of lectures and exams

	Date	Topic
Week 1: Mon	7/3	History of Neuroscience and an Overview of Neuroanatomy
Tues	7/4	4 th of July Holiday – NO CLASS
Wed	7/5	Cellular anatomy (Neurocytology) and the Basics of Neurophysiology
Thu	7/6	Spinal cord organization and Nervous system development
Week 2 Mon	7/10	Sensory pathways I: Touch and Pain
Tu	7/11	Sensory pathways II: Hearing/Balance
Wed	7/12	Sensory pathways III: Vision
Thu	7/13	Midterm I (weeks 1-2)
Week 3 Mon	7/17	Cranial nerves and brainstem organization
Tu	7/18	Motor system I: Cerebellum and Motor Learning
Wed	7/29	Motor system II: Basal Nuclei: the brakes on our behavior
Thu	7/20	Motor system III: reflexes and corticospinal tract
Week 4 Mon	7/24	Autonomic nervous system and Hypothalamus
Tu	7/25	Chemical Neuroanatomy and Modulation of Mood
Wed	7/26	Chemical senses: smell and taste; Amygdala and the Limbic System
Thu	7/27	Midterm II (weeks 3-4)
Week 5 Mon	7/31	Hippocampus, Learning and Memory
Tu	8/1	Neocortex; Laminar and Columnar organization
Wed	8/2	Neuropathology: a lot can go wrong!
Thu	8/3	Language: Highest Function of the Cortex
Week 6 Mon	8/07	Thalamus – the sensory and motor gate and its role in the control of sleep
Tu	8/8	Volition – free will, behavior and consciousness and review session
Wed	8/9	Review session
Thu	8/10	Final Exam (cumulative, but weighted to weeks 5-6)