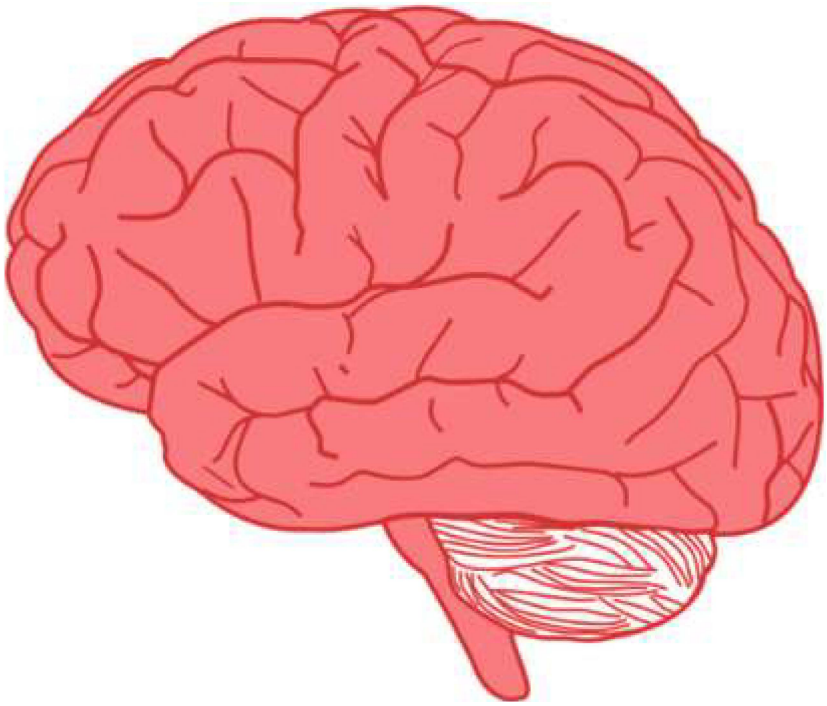
Introduction to the Functional Anatomy of Central Nervous System (NEUROSC-102)



Lecture: MW 11am-1pm KNSY PV 1200B

Lab: MW 2PM-4PM HLTHSCI IP151

Email: All Communication via email (Dr. Hoffman) & Canvas Inbox (Dr. Dominguez)

Ann Hoffman, PhD

hoffmana7@ucla.edu (mailto:hoffmana7@ucla.edu)

Drop in Hours: Fridays, 1:30-3PM - In Person CHS 18-246

Elena Dominguez, Ph.D.

Drop in Hours: Daily appointments available via Zoom: calendly.com/endoming

TA: Terry (TJ) Prins **tjprins@ucla.edu (mailto:tjprins@ucla.edu)**

Drop in Hours: Monday/Wednesday 4-5pm - In Person after lab CHS 1P-151 (where lab is held)

This course is a detailed overview of the human nervous system that covers the detailed neuroanatomical organization of the brain. We discuss the development of the brain and how anatomical structures affect normal behaviors and neurological dysfunction.

By the end of the course students will be able:

- Identify and describe the major regions and structures of the central and peripheral nervous systems, including the brain, spinal cord, and cranial nerves.
- Explain the functions associated with different neuroanatomical structures, such as the cerebral cortex, basal ganglia, thalamus, brainstem, cerebellum, and limbic system.
- Trace the major neural pathways involved in sensory and motor processing, including the corticospinal tract, spinothalamic tract, and dorsal columns.

Lecture: In-person lectures on Mondays & Wednesdays (11AM-1PM) in KNSY PV 1200B, lectures are NOT recorded, and slides will be posted on Canvas before lectures

Lab: In-person labs on Mondays or Wednesdays - depending on your assigned section (2-4PM), lab manuals will be posted at the beginning of the week on Canvas.

You should also watch the supplemental online lab videos posted on Canvas and go through the lab manuals early in the week so that you are prepared for the lab. This will allow you to make the most out of your learning time in the lab. Come prepared! You shouldn't be seeing the lab material for the first time when you sit down in lab each week.

General Syllabus Disclosure:

This syllabus is subject to change given changes to UCLA policies and our classroom environment. We will notify you of changes made to the syllabus after the first week of class. The schedule and assignments are also subject to change - so make sure to check Canvas for updated instructions, assignment due dates. and readings. We will send announcements via Canvas to notify of major changes. Additionally. no lesson is intended to espouse. promote. advance. inculcate. or compel a particular feeling. perception. viewpoint. or belief.

Important Information:

- Attending lecture and lab and studying them during the week that they are taught is critical. Do not fall behind because it is almost impossible to catch up with the amount of material that we will be covering in only 6 weeks. You are responsible for knowing what is presented in lecture and labs.
- Questions about lab section registration: contact Aftin Whitten (Student Affairs Officer, awhitten@mednet.ucla.edu 310-206-4407)
- Personal Protective Equipment (PPE) is required in lab. Gloves and disposable protective gowns will be provided at each lab. If students wish to purchase their own lab coat to wear instead, then they can get them at the health science book store located in CHS.
- Students must bring their own protective eyewear. Glasses worn for personal vision are adequate eye protection. If you do not wear glasses, you will need to provide your own protective goggles. They can be purchased at the health science store in CHS but you will most likely get these much more affordably from Amazon.com. You must remember to bring these to your wet specimen labs or you will not be able to take part in the labs.
- **Students must also be wearing appropriate long pants and close-toed shoes or you will not be allowed to take part in the labs. NO shorts, NO skirts/skorts, NO open toed shoes, and NO food or drinks of any kind in the room.**
- **Labs will take place in the Center for Health Sciences (CHS) building (across the street from the Ronald Reagan Hospital) on the first floor in room 1P-151: (map coming soon)**
- Sorry, no honors contracts will be offered for this course.
- Please note that there is an additional lab fee associated with this class that is sometimes charged to students' accounts after the class is underway. We have nothing to do with setting the amount of this fee or charging this fee in any way. If you have questions about it please talk to with Aftin Whitten, your undergraduate advisor.
- DO NOT sell or upload this course material to websites like Course Hero, StudyBlue, Slide Share, other similar sites, or test banks. Copying and sharing of exam or lab quiz questions in any format (notes, screenshots, photos, videos, etc.) is not permitted and will result in a referral to the Dean of Student's Office. Furthermore, the PDFs of our lecture slides and lab guides are provided to students on CCLE as a courtesy to help you study and can be withheld if this is abused.

Student Expectations & Ways to Succeed:

In this course, everyone has the potential to succeed, and we're here to support you every step of the way. Don't hesitate to ask for help and remember that your efforts and questions are vital to your success. Below are some tips:

Come to every class and lab. Be on time and be present.

Being present means being an active student. Take notes, try problems, write down questions, and ask them when you don't quite get it. Your goal during class should be to think actively and make connections so that the concepts make sense to you. Our goal is to help you make these connections.

Communicate.

Use drop-in hours, Canvas Inbox, & group messaging to communicate with your classmates and me. Don't wait until you're struggling with a problem. Address any issues well before assignments are due and assessments take place. Reach out when you need help developing a strategy either for a problem or for managing the course. We will ask you throughout the course what is going well and what needs improvement.

Other ways to succeed this semester:

- **log in** to the course **~3-4 times** per week and frequently check you Canvas messages to ensure you are competing all assignments and get the most updated information;
- **respond** to **canvas inboxes** within **2 days;**
- **submit** assignments by the corresponding deadline;
- **check in with the TA or instructors to discuss where you are struggling, reach out early;**

The instructors will:

- log in to the course 4 times week;
- offer daily drop-in hours;
- respond to **canvas inboxes** within **48 hours. Emails that we receive during the weekend will be responded to on Monday.**

Contacting your Professor/TA:

All communication for this course will happen via email (Dr. Hoffman), Canvas Inbox (Dr. Dominguez), and Piazza.

This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, the TA, and instructors. Rather than emailing questions to the teaching staff, we encourage you to post your questions on Piazza. If you have any problems or feedback for the developers, email team@piazza.com.

Find our class signup link at:
https://piazza.com/ucla/summer2024/241cneurosc102lec1241cneurosc192asem1

Questions about…	
Course & Assignment content	Piazza & Drop-In Hour
Personal Circumstances	Drs. Hoffman & Dominguez or TA
Canvas Setup/Unpublished Content	Drs. Hoffman & Dominguez
Grades & Submitting Assignments	TA: Terry (TJ) Prins
Missed Assignments	TA: Terry (TJ) Prins

Exams Policies:

- There is one midterm and one final exam
- The final exam is cumulative
- There are 5 weekly lab quizzes (you may drop one) and a final lab practicum
- No early or late exams permitted
- If you are unable to take an exam because of an illness or emergency, you must contact us **before the exam** and provide a doctor's note or some other relevant documentation.
- Exams and quizzes are closed book / closed note. You are required to take your quizzes and exams on your own without any collaboration with anyone. You will take your exams in-person in the same classroom as your lectures and your weekly lab quizzes will take place at the beginning of lab. Any violation of exam rules will result in the student being reported to the Dean of Student's Office.
- The midterm and final exams will be a mixture of multiple choice, T/F, fill-in, matching, and structure ID (midterm-100 points, final-160). The final exam is cumulative.

The midterm will be held in class and will cover lectures 1-6.

The final exam will cover the entire course although there will be more questions from lectures 7-11 which take place after the midterm.

The final lab practicum will cover only the material in your lab manuals and labs**.** See the class schedule below for a summary of important dates.

Testing Procedure - In order to reduce distractions and maintain academic integrity during quizzes/exams, we have the following procedures:

- Students must arrive on time for the exam and bring a government-issued or UCLA photo ID. **Nobody will be permitted in after 10 minutes.**
- Nobody will be permitted to leave the room and then continue taking the exam
- No electronic devices (including cell phones, smartwatches, or any other electronic communication devices) are allowed during the exam.
- We reserve the right to relocate students before and during exams at my discretion for monitoring. If you have specific accommodations, please contact student academic support to make arrangements.

Student Expectations:

Come to every class. Be on time and be present.

The beginning of class is a great time to review previous material and build new concepts. Being present means being an active student. Take notes, try problems, write down questions, and ask them when you don't quite get it. Your goal during class should be to think actively and make connections so that the concepts make sense to you.

Communicate.

Use drop in hours, Canvas Inbox, & group messaging to communicate with your classmates and me. Don't wait until you're struggling with a problem. Address any issues well before assignments are due and assessments take place. Reach out when you need help developing a strategy either for a problem or for managing the course. We will ask you throughout the course what is going well and what needs improvement.

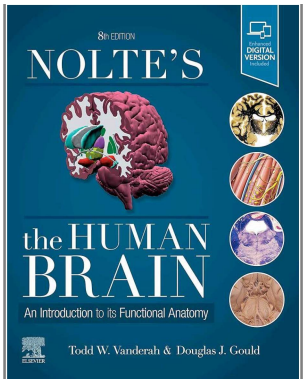
Other necessary ways to succeed this semester:

- **log in** to the course **~3-4 times** per week and frequently check you Canvas messages to ensure you are competing all assignments and get the most updated information. Changes to test dates, times and corrections are announced through this modality and are your responsibility to know about these updates;
- **respond** to **canvas inboxes** within **2 days;**
- **submit** assignments by the corresponding deadline;
- **check in with the TA or me to discuss where you are struggling, reach out early;**

The instructor will:

- log in to the course 4 times week;
- respond to **canvas inboxes** within **48 hours. Emails that we receive during the weekend will be responded to on Monday.**

Textbook



The Human Brain: An Introduction to its Functional Anatomy.

J Nolte. Mosby, 6th, 7th, or 8th Edition. Edition 6-8 are all fine.

ISBN 9780323653985

The book is for supplemental learning but we very highly recommend that you have this book. There are no assigned readings but every chapter compliments what we will be learning and you will know the material better if you read the Nolte chapters as well. Students find it very helpful to hold onto this textbook to use as a reference for all of their upper division neuroscience classes beyond its use in this class.

Grading:

Grading will be on a straight grading scale, meaning that everyone in class may earn an “A”. Final letter grades will be based on total points scored (see below).

Course Grades Distribution Table

Course Requirements	Points for Each	Description
Lab Quizzes	40	There will be 5 short quizzes at the start of every lab starting in week 2. The quiz will be on the material presented in the previous lab (10 points per quiz). Therefore, there is no lab quiz during week 1.

Course Requirements	Points for Each	Description
		Quizzes are taken first thing in lab so DO NOT BE LATE. There are no make-up quizzes. We will drop your lowest lab quiz score so only your 4 top scores count toward your final grade.
Midterm	100	The midterm and final exams will be a mixture of multiple choice, T/F, fill-in, matching, and structure ID.
Lab Practicum	100	The final lab practicum will cover only the material in your lab manuals and labs.
Final Exam	160	The final exam is cumulative.

Schedule:

Week #	Date	Lecture #	Topic
Week 1		1	Introduction
		2	Brain Development
		Lab 1	Sheep Brain Dissection
Week 2		3	Cellular Structure
		4	Ventricles, Meninges, Vasculature
		Lab 2	Ventricles, Dural Reflections, Circle of Willis Lab Quiz 1 (Sheep Brain)
Week 3		5	Cortex
		6	Thalamus, Basal Ganglia, and Hypothalamus
		Lab 3	Thalamus & Basal Ganglia Dissection Lab Quiz 2 (Ventricles, Dura, Circle of Willis)
Week 4		MIDTERM	Midterm Exam (Lectures 1-6)
		7	Spinal Cord
		Lab 4	Cow Spinal Cord Dissection Lab Quiz 3 (Thalamus & Basal Ganglia)
Week 5	2-Sep **Labor Day Holiday**	8	Ascending & Descending Tracts **(Recording)**
		9	Brainstem & Cranial Nerves
		Lab 5	Lab Quiz 4 (Spinal Cord)
Week 6		10	Cerebellum
			Lab Quiz 5 (Brainstem & Cranial Nerves)
		11	Limbic System
		LAB FINAL	Lab Practicum 2-2:30PM
		FINAL	Final Exam (Cumulative)

Course Summary:

Details

Extra Credit Discussion Post
(https://bruinlearn.ucla.edu/courses/188589/assignments/1655240) du b

Extra Credit for Course Evals
(You guys did it!)
(https://bruinlearn.ucla.edu/courses/188589/assignments/1669865)

Details

Final Exam
(https://bruinlearn.ucla.edu/courses/188589/assignments/1655239)

Lab Practicum
(https://bruinlearn.ucla.edu/courses/188589/assignments/1655238)

Lab Quiz 1
(https://bruinlearn.ucla.edu/courses/188589/assignments/1645822)

Lab Quiz 2
(https://bruinlearn.ucla.edu/courses/188589/assignments/1649034)

Lab Quiz 3
(https://bruinlearn.ucla.edu/courses/188589/assignments/1651688)

Lab Quiz 4
(https://bruinlearn.ucla.edu/courses/188589/assignments/1655236)

Lab Quiz 5
(https://bruinlearn.ucla.edu/courses/188589/assignments/1655237)

Midterm
(https://bruinlearn.ucla.edu/courses/188589/assignments/1653473)