

BIPN 160 Neuroanatomy Summer Session I

Instructor

Marc Marino, PhD

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If you email Dr. Marino, please put BIPN160 in the subject.

(Hybrid) Office hours

Monday 11:00 AM -12 PM in H&SS 1145I or on Zoom: (<https://ucsd.zoom.us/j/6858999405>)

Instructional Assistants

A01/A05 Luiza Gaudio (lgaudio@ucsd.edu)

A02/A06 Celina Savo (csavo@ucsd.edu)

A03 Krisha Bagga (kbagga@ucsd.edu)

A04 Sara Mumford (smumford@ucsd.edu)

Lecture: A00 (All Sections) M/Tu/W/Th 12:30-1:50 (York Hall 2722)

Discussion: A01 T/TH 2 PM-2:50 PM (Mandeville B-104)

A02 M/W 3 PM-3:50 PM (Mandeville B-104)

A03 M/W 4 PM-4:50 PM (Mandeville B-104)

A04 M/W 5 PM-5:50 PM (Mandeville B-104)

A05 M/W 6 PM-6:50 PM (Likely on Zoom)

A06 M/W 7 PM-7:50 PM (Likely on Zoom)

Final: A00 (All Sections) Tu 9/8/23 8:00-11:00 AM (TBD)

Course website: On Canvas

Course learning objectives:

The goal of the course is to give students a fundamental understanding of the anatomy of the human brain: both the central and peripheral nervous system as it relates to neural circuits, behavior, perception and cognition. There will be an emphasis on how discovery happens, and thus, we will also examine research from animals. Students will be able to anatomically identify key areas in the human brain involved in specific functions, and the course will explore the evidence that implies the function of key brain areas.

1. **Identify** anatomy and recall function of key brain areas and peripheral nerves.
2. **Highlight** key experiments that allow us to assign functions to brain areas.
3. **Understand** techniques and tools to dissect neuroanatomy and function.
4. **Construct** knowledge from evidence
5. **Develop** critical thinking and problem solving in the context of difficult neuro-biological experimentation.
6. **Communicate** research to peers as well as a broader audience.

Attendance Policies

This is an **in person class** and will not be offered in a remote format. That being said: **Lectures will be podcasted** in case the lecture is missed or so that students can review material. I highly encourage everyone to attend lecture and discussion sections: extra credit will be awarded based on attendance. Pedagogical evidence and my experience shows that the most effective learning happens when material is actively being interacted with in person: so lectures and discussion sections will be places of active learning in which students will be expected to work through problems, participate, ask questions, and answer questions.

Discussion Sections

Sections are voluntary and begin the second session, e.g. W/Th 7/5 and 7/6. **You are free to attend any section and go between them as needed.** Lecture material will be reviewed, questions answered, and problem sets discussed. Attendance will be taken and extra credit will be given for attendance such that each discussion section is worth 2 points.

Notes on COVID-19 Safety

As of Summer Quarter 2023 as per UCSD [guidelines](#) masks are no longer required in the classroom. Be aware that these guidelines may change at any time. I encourage everyone to be **mindful of any viral symptoms.** **If you suspect you have been exposed I encourage you to mask.** If you feel sick and have symptoms consistent with COVID-19 or another respiratory virus: **stay home**, contact your IA and instructor, and get tested.

iClickers

iClicker will be used in the lecture to provide engagement and assess learning. Participation is encouraged but not required. Extra credit will be given for participation so that for each lecture attendance 1 point of extra credit will be given.

Grading

Problem Sets (100 pts, 20 pts each)

- Problem sets are part of your grade. There will be 5 problem sets worth 20 points each. They will be graded for effort/completion and not accuracy. If you earnestly attempt to answer all questions you will get full credit. Points will be deducted for unanswered questions or answers that are not sincere attempts. Problem sets will be accepted late with the penalty of 4 points per day.

Three midterms (200 pts, 100 pts each, drop 1)

- Multiple Choice and short answer exams focused on lecture material. Problem sets will serve as example questions for exams. Your lowest exam grade will be dropped. You may skip one midterm if you want to drop that exam. **One note sheet will be allowed during each exam. Note sheet must be standard 8.5 x. Single sided only.**

Final Exam (200 pts)

- Comprehensive final, cannot be dropped. Multiple Choice and short answer exams focused on lecture material. All students must take the final. **One note sheet will be allowed during each exam. Note sheet must be standard 8.5 x. For the final Double sided is OK.**

Basis for Final Grade. There will be three exams during normal class time worth 100 points each and one comprehensive final exam worth 150 points. Therefore, the grade will be based on 420 points: 200 (exams) + 200 (final) + 100 (P.S.) = 500.

Additional notes on grading

The grading scale below will be used, however, grades will likely be curved to raise the average grade if necessary. The average grade target is a B or B+.

- Final scores will be converted to letter grades, where A=90-100%, B=80-89.99%, C=70-79.99%, D=60-69.99%, and F=0-59.99%. For positive and minus grades, A+ = 97-100, A = 93-96.99, A- = 90-92.99, B+ = 87-89.99, B = 83-86.99, B- = 80-82.99, and so on.
- Final scores are as you see them on Canvas, once all of your assignments are graded. There is **no rounding up** to the closest score.

Missed exams: Do not miss exams. You are expected to take the exams when they are scheduled during normal class time. Make-up exams will only be arranged in extreme situations. Any other exceptions will be decided on a case-by-case basis.

Grading objections and regrades: If you have an objection to a particular exam question, you have 24 hours from the end of the exam to raise your concerns. Objections to exam questions must be made by email, with a written argument of why that question was unfair. A decision will then be made whether to exclude that question for the entire class.

If you have objections to the grading of a question on your exam, you can discuss with Dr. Marino during office hours or by email. Regrades will only be available within a week after you receive the exam grade. Note that a regrade may result in a gain or loss of points. Graded exams will be copied before being returned. If you are caught altering your answer to an exam question for a regrade, you will be given a zero on the entire exam and reported for academic dishonesty.

Course Philosophy

A note on our course's environment

We'll be working together to create an equitable and inclusive environment of mutual respect, in which we all feel comfortable to share our moments of confusion, ask questions, and challenge our understanding. Everyone should be able to succeed in this course. If you do not feel that is the case please let me or an IA know.

Course accommodations

If you need accommodations for this course due to a disability, please contact the Office for Students with Disabilities (osd@ucsd.edu) for an Authorization for Accommodation letter. Please speak with me in the first week of class if you intend to apply for accommodations. For more information, visit <http://disabilities.ucsd.edu>. We will use the Triton Testing Center (TTC) for OSD tests, please make sure you are signed up on register blast and able to take your exams there.

This course, and the work it entails, is for you

So, you won't benefit if others do your work. Cases of academic dishonesty or cheating will be first handled by me, and then by the Academic Integrity Office. If you become aware of cheating in this class, you can anonymously report it: <https://academicintegrity.ucsd.edu/>

Course management & texts

Canvas

This course will be using Canvas to manage content and grades. You can log in by going to <http://canvas.ucsd.edu>. If you need any technical assistance with Canvas, please alert your instructor and send an email to servicedesk@ucsd.edu.

Textbook

This class is not designed from a textbook and one is not required. I have added these texts as course reserves if you wish to review them. Course material is mostly taken from a few sources, including:

- 1) The Human Brain: An introduction to its functional anatomy, by Nolte.
 - 2) The Brain: An introduction to functional Neuroanatomy, by Watson, Kirkcaldie and Paxinos.
 - 3) Principles of Neurobiology, by Liqun Luo
 - 4) Atlas of the Human Brain 4th Edition, Jurgen K. Mai, et al.
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Additional resources

There are many more resources listed [here](#) to help you thrive this quarter. If there is anything you think we can help you out with, please reach out to the IAs or Dr. Marino.

Course schedule

Subject to change. **You can find readings & due dates for assignments on Canvas.**

Week 1

M July 3	Lecture	York Hall 2722	L1: Introduction, Neurons and Glia, Gross anatomy	A02-A06 No Sections
Tu July 4	No Lecture		<i>Independence Day Holiday</i>	A01 No Section
W July 5	Lecture	York Hall 2722	L2: Techniques to study neuroanatomy and function	A02-A06 Discussion #1: Problem Set #1
Th July 6	Lecture	York Hall 2722	L3: Spinal cord and periphery	A01 Discussion #1: Problem Set #1
F July 7	-	-	-	-

Week 2

M July 10	Lecture	York Hall 2722	L4: Cranial nerves, Ventricles and Blood Supply	Problem Set #1 Due @ 11:59 PM A02-A06 Discussion #2: Review
Tu July 11	Lecture	York Hall 2722	L5: Brainstem, Thalamus	A01 Discussion #2: Review
W July 12	Lecture	York Hall 2722	Exam 1: In Person Exam	A02-A06 Discussion #3: Problem Set #2
Th July 13	Lecture	York Hall 2722	L6: Sensory cortex, somatosensory and auditory systems	A01 Discussion #3: Problem Set #2
F July 14	-	-	-	-

Week 3

M July 17	Lecture	York Hall 2722	L7: Visual system	Problem Set #2 Due @ 11:59 PM A02-A06 Discussion #4: Review
Tu July 18	Lecture	York Hall 2722	L8: Chemosensory systems	A01 Discussion #4: Review
W July 19	Lecture	York Hall 2722	Exam 2: In person Exam	A02-A06 Discussion #5: Problem Set #3
Th July 20	Lecture	York Hall 2722	L9: Hedonics: Ventral striatum, amygdala, and others:	A01 Discussion #5: Problem Set #3
F July 21	-	-	-	-

Week 4

M July 24	Lecture	York Hall 2722	L10: Hypothalamus: Homeostasis and drives	Problem Set #3 Due @ 11:59 PM A02-A06 Discussion #6: Review
Tu July 25	Lecture	York Hall 2722	L11: Brain areas for sleep and arousal	A01 Discussion #6: Review
W July 26	Lecture	York Hall 2722	Exam 3: In person Exam	A02-A06 Discussion #7: Problem Set #4
Th July 27	Lecture	York Hall 2722	L12: Movement control: basal ganglion, and motor cortex	A01 Discussion #7: Problem Set #4
F July 28	-	-	-	-

Week 5

M July 31	Lecture	York Hall 2722	L13: Cerebellum	Problem Set #4 Due @ 11:59 PM A02-A06 Discussion #8: Problem Set #5
Tu Aug 1	Lecture	York Hall 2722	L14: Hippocampus: Learning and memory	A01 Discussion #8: Problem Set #5
W Aug 2	Lecture	York Hall 2722	L15: Frontal cortices and higher order functions	A02-A06 Discussion #9: Problem Set #5
Th Aug 3	Lecture	York Hall 2722	Review Session for Final	A01 Discussion #9: Problem Set #5
F Aug 4	-	-	-	Problem Set #5 Due @ 11:59

Finals Week

Saturday Aug 5	Final	TBD 8-11 AM	Final Exam: In Person Exam 9/5/23 11:30 AM-2:30 PM	IN PERSON EXAM
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