

2023 FALL COURSE SYLLABUS: BIPN 150 (4 units)

Title: Diseases of the Nervous System

From UCSD Course Guide: BIPN 150. Diseases of the Nervous System (4)

Course will be taught from a research perspective, highlighting the biological pathways impacted by different neurological diseases. Each disease covered will be used to illustrate a key molecular/cellular pathway involved in proper neurological function.

Prerequisites: BIBC 102 and BICD 100; BIPN 140 may be taken concurrently.

Classroom locations/dates/times

(Classes will be all in person)

LE A00 TuTh 8:00a-9:20a TATA 3201

Text books/reading material:

Reading will be assigned from:

1. Neuroscience fifth edition (editors: Purves, Augustine, Fitzpatrick, Hall, LaMantia, McNamara, White)
2. Principles of Neurobiology (Liqun Luo)
3. Scientific American (PDF files available on class web site).
4. Scientific American Mind (PDF files available on class web site).
5. Lancet Journal Review articles (PDF files available on class web site).
6. Primary research articles (PDF files available on class web site).

Grade:

45% Midterm Test

40% of grade is based on multiple choice questions and short answer questions covering lectures from the first half of course.

5% of the midterm exam is based on questions from the papers covered in study sections during the first half of the course.

45% Final Test

40% of grade is based on multiple choice questions and short answer questions covering lectures from the second half of course.

5% of the midterm exam is based on questions from the papers covered in study sections during the second half of the course.

10% IA grade based on study session oral participation.

Grading and Definitions

Do **not** expect to be graded solely in comparison to your classmates (i.e. a curve).

A: Honor grade indicating excellence. Earned as a result of a combination of superior examination scores and ability to deal resourcefully with abstract ideas. This grade reflects highly probable success in a field relating to neurobiology or probable continued success in sequential courses.

B: Honor grade indicating competence. Earned as a result of a combination of high examination scores and commendable mastery of pertinent skills. This grade reflects probable success in a field relating to neurobiology or probable continued success in sequential courses.

C: Standard grade indicating successful performance earned as a result of a combination of satisfactory examination scores, and fair ability to deal with abstract ideas. This grade reflects sufficient evidence of ability to warrant entering sequential courses.

D: Substandard grade indicating the student has met only minimum requirements and is usually associated with low examination scores, a poor ability to grasp abstract ideas, and/or poor class participation.

F: Non-passing grade indicating failure to meet minimum requirements for exams and participation.

Study Session (on Zoom):

252240 DI A01 M 2:00p-2:50p RCLAS R24

All students **MUST** attend one study session per week.

Approximately 35 minutes per session will be used for presentation of a research paper/s relevant to the most recent lectures. Students will be called on to describe portions of the papers and discuss the research. Participation in the research discussion will be assigned a grade by the TA.

The remaining ~15 minutes will be used to address questions regarding the lecture material and reading.

Course Instructors:

Primary: Yimin Zou (yzou@ucsd.edu, 534-7212)

Secondary: Sam Pfaff (pfaff@salk.edu, 453-4100 x2018)
Kuo-Fen Lee (klee@salk.edu, 453-4100 x1120)

IA: Ashna Nisal (Grad Instructional Assistant, anisal@ucsd.edu)

Navid Ghazi (Undergraduate Instructional Apprentice,
nghazi@ucsd.edu)

Office Hours:

Yimin Zou will give office hours at 2 pm on the Thursdays of the weeks he is giving lectures in person and on Zoom: 1224A Pacific Hall (Zoom link can be found in Canvas)

Ashna Nisal will give office hours from 11 am to 12 noon on Wednesdays at the Mandeville Coffee Cart (Art of Espresso)

General Information:

Reading the assigned material before the class is held will help you follow the lecture.

Attendance at classes AND 1 IA session per week is your best way of ensuring you get a good grade. Every attempt will be made to post reading material and lecture notes on the class website (URL to be provided during class). This information will not necessarily cover everything discussed during class lectures and IA sessions, and therefore is not a substitute for attendance.

If you miss a lecture arrange to get the class notes from another student – this is not the responsibility of the instructors or IA.

If you cannot attend one of the IA sessions and/or the midterm and final exams it is recommended you drop the course because your grade will likely be affected.

If an emergency arises and you cannot take the midterm or final exam, the makeup will be an oral examination of the material or a term paper at the discretion of the instructor.

Key dates during winter quarter 2023

Fall Quarter begins: Monday, September 25

Instruction begins: Thursday, September 28

Fifteenth Day of Instruction: Wednesday, October 18

Veterans Day Holiday: Friday, November 10

Thanksgiving Holiday: Thursday – Friday, November 23-24

Instruction ends: Friday, December 8

Final Exams: Saturday – Saturday, December 9–16

Fall Quarter ends: Saturday, December 16

CLASSES IN FIRST HALF COVERED IN MIDTERM

Thursday Sept 28: (Yimin Zou): Introduction to course – Yimin Zou
Basics of Neuroanatomy – Yimin Zou

Tuesday Oct 3: (Sam Pfaff): Part I Amyotrophic Lateral Sclerosis (ALS, Lou Gehrig's disease)

Thursday Oct 5: (Sam Pfaff): Part II ALS and Spinal Muscular Atrophy (SMA)

Monday Oct 9: Study Section on Review and Paper Discussion (from Pfaff)

Tuesday Oct 10: (Sam Pfaff): Rett Syndrome and Autism

Thursday Oct 12: (Yimin Zou): Pain

Monday Oct 16: Study Section on Review and Paper Discussion (from Pfaff)

Tuesday Oct 17: (Yimin Zou): Addiction

Thursday Oct 19: (Yimin Zou): Epilepsy

Monday Oct 23: Study Section on Review and Paper Discussion (from Zou)

Tuesday Oct 24: (Kuo-Fen Lee): Anxiety

Thursday Oct 26: (Kuo-Fen Lee): Schizophrenia

Monday Oct 30: Study Section Class Review

Tuesday Oct 31: MIDTERM EXAM

Exam covers material from Sept 28 – Oct 26, 2023

CLASSES IN SECOND HALF COVERED IN FINAL

Thursday Nov 2: (Kuo-Fen Lee): Alzheimer's Disease

Monday Nov 6: Study Section on Review and Paper Discussion (from Lee)

Tuesday Nov 7: (Kuo-Fen Lee): Spinal cord injury

Thursday Nov 9: (Sam Pfaff) Prions – Creutzfeldt-Jakob/Kuru; Mad cow

Monday Nov 13: Study Section on Review and Paper Discussion (from Lee)

Tuesday Nov 14: (Yimin Zou): Traumatic brain injury

Thursday Nov 16: (Kuo-Fen Lee): Huntington's disease?

Monday Nov 20: Study Section on Review and Paper Discussion (from Pfaff)

Tuesday Nov 21: (Kuo-Fen Lee): Parkinson's disease?

Thursday Nov 23: Thanksgiving Holiday

Monday Nov 27: Study Section on Review and Paper Discussion (from Zou)

Tuesday Nov 28: (Yimin Zou): Peripheral neuropathy

Thursday Nov 30: (Yimin Zou): Tourette disorder

Monday Dec 4: Study Section on Review and Paper Discussion (from Zou)

Tuesday Dec 5: (Sam Pfaff) Downs Syndrome and William's Syndrome

Thursday Dec 7: (Sam Pfaff) Lissencephaly ("smooth brain" defects)

Monday Dec 11: Study Section – Class Review

TUESDAY DEC 12: FINAL EXAM (8:00a -10:59a)

Covering material from Nov 2- Dec 7, 2023.