Biology 156
Spring, 2022

GLIAL NEUROBIOLOGY
BIPN 156
2022 SYLLABUS

Professor: Nicholas C. Spitzer

Location: CENTR 119, Tues/Thurs 3:30-4:50 pm
Lectures will be podcast.

Text: **"**Glial Neurobiology: A Textbook", Verkhratsky & Butt (John Wiley & Sons, Publishers; available as an e-book from RedShelf).

Articles: Pdfs of research articles; available on Canvas.

DATE		LECTURE TOPIC	READING
Mar	29	1 Introduction to glia	Chapters 1 & 2
	31	2 Glial morphology	Chapter 3
Apr	5	3 Developmental origins of glia	Chapter 4
	7	4 Glial physiology I – channels, receptors & transporters	Chapter 5
	12	5 Astrocyte discoveries I	Research articles
	14	6 Microglia discoveries I	Research articles
	19	**1st MIDTERM EXAM**	
	21	7 Glial physiology II – transmitter release & uptake	Chapter 6
	26	8 Glial physiology III – calcium signaling & tripartite synapse	
	28	9 Astrocyte developmental, structural & vascular functions	Chapter 7
May	3	10 Astrocyte metabolic & homeostatic functions	Chapter 7
	5	11 Astrocyte discoveries II	Research articles
	10	12 Microglia discoveries II	Research articles
	12	**2nd MIDTERM EXAM**	
	17	13 Microglia functions	
	19	14 Oligodendrocyte & Schwann cell functions	Chapter 8
	24	15 Oligodendrocyte discoveries I	Research articles
	26	16 Oligodendrocyte discoveries II	Research articles
	31	17 Stroke & degenerative diseases	Chapters 9 & 10
Jun	2	18 Demyelinating diseases & other disorders	
	6	**FINAL EXAM**	

Sections: Start the week of March 28th.

Class website: Canvas

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GENERAL INFORMATION

INSTRUCTOR: Nick Spitzer, 3222A Pacific Hall, nspitzer@ucsd.edu, 534-3896.
OFFICE HOURS: Nick Spitzer: Wednesday, 2-3 pm.

INSTRUCTIONAL ASSISTANTS: Sean Harvey and Susie Choi
OFFICE HOURS: Sean, Tuesday & Thursday, HSS 1145L, 2:30-3:30 pm
Susie, Thursday, HSS 1145L, 7:00-8:00 pm and by Zoom

DISCUSSION SECTIONS: The sections are useful opportunities to go over material that has been presented in the lectures and in the reading. Mondays, 10am and 11am (HSS 2321); Wednesdays, 5pm (U301 122); Thursdays, 6pm (HSS 2154).

EXAMS: The grade in the course depends on two midterm exams and a final exam. The two midterms are each worth 35% of the grade and the final is worth 30%. **All exams will be open-book, open-note, over a one-day period**.

The exams will cover material from lectures and assigned reading. The lectures are important since they highlight matters of particular significance and discuss issues that may be complex. The text is important since this reading provides further background and the instructor does not cover all of the material in lecture. Exams will consist of short answer questions about material from lectures and reading and questions about papers presented in lecture.

Grading:	1st Midterm	35%
	2nd Midterm	35%
	Final Exam	30%
	Grading is on a curve.	