Biology 156
Spring, 2021

GLIAL NEUROBIOLOGY
BIPN 156
2021 SYLLABUS

Professor: Nicholas C. Spitzer

Location: Tent P416 East & remotely online, Tues/Thurs 2:00-3:20 pm
Lectures and discussion sections will be recorded and available for asynchronous viewing.

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	30	1 Introduction to glia	Chapters 1 & 2
Apr	1	2 Glial morphology	Chapter 3
	6	3 Developmental origins of glia	Chapter 4
	8	4 Glial physiology I – channels, receptors & transporters	Chapter 5
	13	5 Astrocyte discoveries I	Research articles
	15	6 Microglia discoveries I	Research articles
	20	**1st MIDTERM EXAM**	
	22	7 Glial physiology II – transmitter release & uptake	Chapter 6
	27	8 Glial physiology III – calcium signaling	
	29	9 Astrocytes & the tripartite synapse	Chapter 7
May	4	10 Astrocyte developmental, structural & vascular functions	Chapter 7
	6	11 Astrocyte discoveries II	Research articles
	11	12 Microglia discoveries II	Research articles
	13	**2nd MIDTERM EXAM**	
	18	13 Astrocyte metabolic & homeostatic functions	Chapter 7
	20	14 Microglia functions	Review article
	25	15 Oligodendrocyte & Schwann cell functions	Chapter 8
	27	16 Oligodendrocyte discoveries I	Research articles
Jun	1	17 Stroke & degenerative diseases	Chapters 9 & 10
	3	18 Demyelinating diseases & other disorders	
	8	**FINAL EXAM**	

Sections: Start the week of April 5th.

Class website: Canvas

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GENERAL INFORMATION

INSTRUCTOR: Nick Spitzer, 3222A Pacific Hall, nspitzer@ucsd.edu, 534-3896. **OFFICE HOURS**: Nick Spitzer: Monday & Wednesday, 4-5 pm.

INSTRUCTIONAL ASSISTANTS: Nicholas Nelson, Sunnie Hong, Kathryn Le
IA Office Hours: Nicholas, 11:30-12:30 Monday. Sunnie, 11:00-12:00 Friday. Kathryn, 11:00-12:00 Tuesday.

DISCUSSION SECTIONS: The sections are useful opportunities to go over material that has been presented in the lectures and in the reading.

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.	