



San José State University
Department of Psychology
PSYC/BIO 129-01,
Neuroscience (27952/29310), Spring 2026

Instructor:	Jill Citron, PhD
Email:	jill.citron@sjsu.edu
Class Days/Time:	Monday & Wednesday, 10:30 am – 11:45 am
Classroom Location:	DMH 367
Drop-In Times:	Tuesdays and Thursdays, 1:30 pm – 2:30 pm & by appointment
Office Location:	DMH 350 Zoom Meeting Link on Canvas
Prerequisites:	Either: (a) PSYC 30 and 3 units of BIO, or 9 units of BIO You must <u>complete</u> the prerequisites before taking this course.

CANVAS and MYSJSU Messaging

Copies of some course materials such as the syllabus, major assignment handouts, etc. may be found on Canvas. Messages to the class may be sent through Canvas or MYSJSU.

Course Description

Neuroscience is defined as the study of the nervous system. This field comprises several related disciplines including: Neuroanatomy, neurochemistry, neuropharmacology, neurophysiology, neuroimmunology, and neuropathology. The united efforts of such disciplines have produced a better understanding of the function of the nervous system and its relationship to behavior. This course will examine each of these sub-disciplines in detail, with a focus on both the healthy nervous system and disorders of the nervous system including depression, Alzheimer's disease, and schizophrenia. We will examine specific topics and research methods in depth.

Communication with instructor

Use email, drop-in hours, or class time to ask questions. I respond to email M-F 9:00-5:00. Please allow 1-2 days for a response. When emailing, include a relevant title and our course number (129). If you have extensive questions about an assignment or class work, please come to office hours. Do not hesitate to reach out to me during office hours, after class, or via email. I welcome your questions.

Course Goals and Student Learning Outcomes (CLOs)

Upon successful completion of this course, Psych/Bio 129 students will be able to:

CLO1: *Students will be able to* -identify, describe, and communicate the major concepts related to basic neuroanatomy, neurophysiology, and psychopharmacology.

Assessment for this will be in Infographic #1, and Section Test #1

CLO2: *Students will be able to* -describe and communicate the major transduction mechanisms, neuroanatomical pathways and theoretical perspectives associated with visual and nonvisual sensory systems, motivational systems and learning processes. Assessment for this CLO will be conducted in Class Activities, Infographic #2, Hypothes.is and Section Test #2.

CLO3: *Students will be able to* -identify, describe, and communicate experimental approaches and associated empirical findings for various methodological approaches in neuroscience. Assessment for CLO will be conducted primarily in Section Test #2 and Wikipedia Edit-a-Thon Project.

CLO4: *Students will be able to* think critically and creatively about neuroscience to address behavioral and mental health processes. This CLO will be assessed in Test #3, Wikipedia Edit-a-Thon Project.

CLO5: *Students will be able to* apply neuroscience principles to individual, interpersonal, and group behavior and mental health issues. This CLO will be assessed in Final Project, Section Test #3, and Wikipedia Edit-a-Thon Project.

CLO6: Review empirical findings from the scientific literature concerning a topic relevant to the course allowing them to communicate complex topics relating to the nervous system and behavior. This CLO will be assessed in Homework, Test #3, Wikipedia Edit-a-Thon Project.

Program Learning Outcomes (PLOs)

Upon successful completion of the psychology major requirements, students will be able to:

PLO1: Knowledge Base of Psychology- Students will be able to identify, describe, and communicate the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

PLO2: Research Methods in Psychology- Design, implement, and communicate basic research methods in psychology, including research design, data analysis, and interpretations.

PLO3: Critical Thinking Skills in Psychology- Students will be able to use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes.

PLO4: Application of Psychology- Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.

PLO5: Values in Psychology- Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as members of society.

The goals for this course fall into three categories. In the first portion of our course, we will focus on developing a general understanding of the philosophical issues that drive much of contemporary neuroscience research, on learning the mechanisms that drive early brain development, and on deepening our knowledge of the physiology of the central nervous system. The second section will explore the mechanisms underlying the different sensory systems. In the course's final section, we will apply our understanding of biological mechanisms to various complex behaviors, ranging from motivation and circadian rhythms to learning and language.

Our class meets on campus. We will use Canvas for discussions, assignment submissions, and to store articles we will use during the semester. Be sure to sign up for Canvas notifications, as I will send out announcements during the semester. Canvas is an important component of our class, but it does NOT replace class.

It is strongly recommended that students use the Chrome Web Browser when using Canvas. Using Chrome will decrease the glitches and errors you experience, as Canvas was developed using the Chrome platform.

In addition, update your Canvas setting to receive messages from this course, as announcements are sent out regularly.

Note: clearing your cache may help if you have trouble logging into the site.

Accessing the Course Canvas site

To access the Canvas site go to <http://www.sjsu.edu/at/ec/canvas/> and click on “Log in to Canvas”

Username = SJSU 9-digit ID

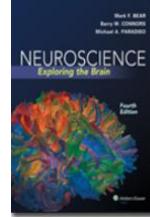
Password = your current SJSUOne password

For additional information or help with logging in:

Canvas Student Tutorial: <http://www.sjsu.edu/at/ec/canvas/>

Required Textbook

Bear, Mark., Barry, W. Connors, Michael A. Paradiso. (2016). Neuroscience: Exploring the Brain (Enhanced 4th edition). Jones & Bartlett Learning.



The Enhanced 4th edition includes an access code to the Navigate system. It is not required, but it will provide additional resources to support your learning during the semester. I have heard rumors that the PDF version is available for free on certain websites. I'm not sure if this is true, so please don't ask me; ask a class peer instead. Additional readings will be posted on Canvas in PDF format.

Library Liaison:

The SJSU librarian specializes in social sciences and may serve as a resource for developing research ideas and finding the most appropriate research materials.

Psychology Librarian: Christa Bailey, Phone: 408-808-2422

Email: christa.bailey@sjsu.edu <http://libguides.sjsu.edu/psychology>

Classroom Protocol

As a member of this class, you are part of a community. Students are expected to maintain professional and courteous behavior. At the beginning of class, we will respect our classmates and expect them to reciprocate. Do not have side conversations, make unrelated comments in class, or look for deals on eBay during class. You may not realize that your actions are distracting to those around you. Students who do not abide by these policies (after being alerted to their behavior) will be asked to leave the class.

Diversity Statement

This class strives to be an inclusive community, learning from the many perspectives that come from having differing backgrounds and beliefs. As a community, we aim to be respectful of all. We reject all forms of prejudice and discrimination, including but not limited to those based on age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, and sexual orientation. Together, we can create an environment that supports inquiry, self-expression, and respect for diverse viewpoints. We all benefit.

Dropping and Adding

Students are responsible for understanding the policies and procedures regarding add/drop, grade forgiveness, and other relevant matters. Refer to the current semester's catalog, policy section. The Late Drop Policy is available at <https://www.sjsu.edu/registrar/calendar/fall-2025.php>.

This semester, the last day to add a class or drop a class without a "W" is September 16th.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity and accommodations, will be available on the Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>.

Attendance

This is an in-person class. Students are expected to attend all meetings, as you are responsible for material discussion, and your active participation in class benefits all class members.

According to University Policy F15-12, "Students are expected to attend all meetings for the courses in which they are enrolled as they are responsible for material discussed therein and active participation is frequently essential to ensure maximum benefit to all class members. In some cases, attendance is crucial to achieving course objectives; for example, students may be required to interact with their peers in the class. Attendance is the responsibility of the student. Participation may be used as a criterion for grading when the parameters and their evaluation are clearly defined in the course syllabus and the percentage of the overall grade is stated."

Assignments and Grading Policy

During this course, you will be required to participate in class and complete various assignments, two Infographic exercises, three examinations (two tests and a final exam), classroom activities, and presentations on hallmark research studies that changed the course of biopsychology.

SJSU classes are designed so that to be successful, students are expected to spend a minimum of forty-five hours per unit of credit (typically three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and other related tasks. More details about the student workload can be found at <https://www.sjsu.edu/curriculum/courses/syllabus-info.php>

Please expect your grades in Canvas to fluctuate throughout the semester. Do not contact me at the end of the semester to ask whether I will round your grade up. I want all my students to succeed, and I will always round grades up (not down) when possible.

Definition of a Credit Hour

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the course's duration. For example, the expected workload for a 3-credit course is 150 minutes of direct faculty instruction and six hours of out-of-class student work each week. Please also review the following sources and policies: <https://www.sjsu.edu/curriculum/courses/syllabus-info.php>

Make-up Exams and Late Assignments

Please check your schedule to ensure you have no conflicts with due dates. Let me know within the first two weeks of the semester if you need an extension. If you are sick and miss an assignment or test, contact me as soon as possible. These are the only avenues for extensions or makeup dates.

Academic Integrity & Generative AI

Academic integrity is essential to San Jose State University's mission. Familiarize yourself with the SJSU Academic Integrity Policy at <https://www.sjsu.edu/curriculum/courses/syllabus-info.php>. When practiced, academic integrity ensures that students receive fair grades. A reminder about academic integrity and Chat GPT: All cases of academic misconduct will be referred to the Office of Student Conduct. Academic misconduct includes (but is not limited to) using ideas, words, images, or content from any other medium that you did not create and presenting that content as if you were the creator. [Academic Integrity Policy F15-7 \[pdf\]](#)

Copying content you did not create—either directly or in a modified form—without properly acknowledging the creator constitutes academic misconduct, as does using unauthorized digital tools, such as artificial intelligence, to create content. An assignment found to be plagiarized or to have used unauthorized tools will automatically receive a zero, and you will not be allowed to repeat the assignment for a passing grade. Depending on the severity of the case, academic misconduct may result in a failing grade in the course. If you are unsure or have questions, please do not hesitate to reach out to me.

A simple rule to follow: *if you use more than four words from another source, they must be cited. All students must use Turn-It-In.*

Summary of Major Assignments

Section Tests. There will be three content tests during the semester. Each will consist of 40 questions (multiple-choice, identification, and short answer). A study guide will be provided approximately a week before each test.

Neuroanatomy Labs. Using the Allen Institute's online resources, *Exploring Pathways in the Brain*, you'll learn about neuroanatomy and gene expression in the brain. In the first assignment, you'll locate specific brain regions using a 3D anatomical atlas, research their functions, and reflect on how specialization shapes overall brain function. You'll also compare these regions across humans and mice to identify key similarities and differences. In the second assignment, you'll examine how a brain region's function relates to its gene expression profile by interpreting *in situ* hybridization (ISH) data. You'll also have the option to compare gene expression patterns between humans and mice for extra credit.

Wikipedia Edits. In this assignment, you will improve a Wikipedia article by adding neutral, well-sourced scientific content, including at least two peer-reviewed journal citations, and submit before/after screenshots and a brief summary of what you changed and why. Then you will monitor the article weekly using “View history” and the “Talk” page, document whether your edits were kept, revised, or undone (noting dates, key contributors, and specific changes), summarize any community feedback and your responses, and submit a short report with screenshots, links, and a reflection on what you learned about collaborative editing and reliable sourcing.

Grading Information

Your final grade will be based on the number of points that you earn during the semester. The following table provides a breakdown of the points you can earn during the semester.

Assignment	How Many?	Points Per Assignment	Total Points	Approximate % Final Grade
Wikipedia Assignment	1	50	50	30%
Section Tests	3	40	120	50%
Neuroanatomy Lab	2	40	80	15%
In Class Activities	4	25	100	4%
Total:			163	100%

Grading Scale

Percent	Grade
100-94	A
93-90	A-
89-87	B+
86-84	B
83-80	B-
79-77	C+
76-74	C
73-70	C-
69-67	D+
66-64	D
63-60	D-
59 or below	F

Student Resources

Student Computer Resources

Computer labs and other technological resources for students can be found in various places on campus:

- For information regarding the loan of laptops, tablets, and other computer materials; <https://library.sjsu.edu/student-computing-services/student-computing-services>
- For IT Support visit - <https://www.sjsu.edu/it/support/service-desk/index.php>
- For a list of software available to all SJSU students visit - <https://library.sjsu.edu/student-computing-services/software-available>

ACCESS Success Center

The Academic Counseling Center for Excellence in Social Sciences (ACCESS) Success Center “provides general education advising for undergraduate students majoring in or intending to major in any of the departments in The College of Social Sciences.” Visit their webpage for more information and to schedule an online appointment, <https://www.sjsu.edu/education/studentsuccesscenter/advising-and-tutoring.php>.

Accessible Education Center (AEC)

Ability Redefined - Please reach out to me as soon as possible in the beginning of the semester, for any support. "If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with AEC to establish a record of their disability. "[Academic Senate Policy F06-2 \[pdf\]](#)

SJSU Peer Connections

Peer Connections website "offers free mentoring, tutoring, and supplemental instruction services for students at SJSU. Peer Educators are students just like you; they understand the triumphs and challenges of being a student at San José State University." If you have questions about services, contact the Peer Connections at 408-924-2587 or email at peerconnections@sjsu.edu, or visit their webpage for more information, <https://peerconnections.sjsu.edu/programs/tutoring/index.html>

SJSU Writing Center

The SJSU Writing Center "offers a variety of resources to help students become better writers, and all of our services are free for SJSU students." If you have questions about services, call the Writing Center at 408.924.2308 or email us at writingcenter@sjsu.edu, or visit their webpage to make an online appointment <https://www.sjsu.edu/writingcenter/>

SJSU Counseling and Psychological Services (CAPS)

SJSU Counseling and Psychological Services invites "all students to come into Counseling and Psychological Services, located at the Student Wellness Center, room 300B, for any support.

If you have questions about services, contact CAPS at (408) 924-5910 or email at counseling.services@sjsu.edu or visit their webpage, <https://www.sjsu.edu/counseling/>

Student Support Services

Housing Assistance for students who lack stable, adequate housing <https://www.sjsu.edu/sjsucares/get-assistance/housing.php>

Spartan Food Pantry is a walk-in, full-service food assistance program for qualifying students.

<https://www.sjsu.edu/sjsucares/get-assistance/spartan-food-pantry/index.html>

CalFresh Foods offers monthly cash assistance to buy groceries. CalFresh has supported many students who are experiencing budget constraints. <https://www.sjsu.edu/sjsucares/get-assistance/calfresh.php>

COURSE SCHEDULE

Note: This schedule is subject to modification (with fair warning, no surprises, promise) as necessary to accommodate flexibility in our class schedule.

Week	Date	Topics	Reading Before Class
1	M -1/26	Welcome, Course Overview, Retrieval Practice	
	W- 1/28	Review of Neurobiology	
2	M- 2/02	Neurons and glia	Chapter 2
	W- 2/04		Skim Chapter 3
3	M- 2/09	Action Potential	Skim Chapter 4
	W- 2/11		Skim Chapter 5
4	M- 2/16	Neurotransmitters and pharmacology	Chapter 6
	W- 2/18		Chapter 15 (538-548)
5	M-2/23	Test #1	
	W-2/25	Neuroanatomy 1	Chapter 7
6	M- 3/02	Neuroanatomy 2	Chapter 7
	W- 3/04	Neuroanatomy Lab– Allen Institute Bring laptop to class. 1. Exploring Anatomy	Lab materials provided. Lab 1 Due: 4/8
7	M- 3/09	Neuroanatomy Lab– Allen Institute Bring laptop to class. 2. Integrating Gene Expression and Anatomy	Lab 2 Due: 4/15 Lab materials provided.
	W- 3/11	The Eye and Vision	Chapter 9
8	M- 3/16	Auditory System	Chapter 11
	W- 3/18	Somatic Sensory System	Chapter 12
9	M- 3/23	Motor System	Additional reading in Chapter 14 – Brain Control Module.
	W- 3/25	Test #2	Of Movement
10	M- 3/30	Spring Break!	
	W- 4/01		
11	M- 4/06	Wikipedia Project Planning	Wiki- Submit Account Information & Topic Due: April 5 th
	W- 4/08	ANS	Chapter 15
12	M-4/13	HPA Axis	Chapter 15
	W-4/15	Homeostasis and Motivated Behavior	Chapter 16

13	M- 4/20 W-4/22	Sex and the Brain	Chapter 17
14	M- 4/27	Brain Rhythms and Sleep	Chapter 19
	W- 4/29	EEG Reading	In-Class Assignment
	M- 5/04	Emotion	The Limbic System Fear & the Amygdala Anger & Aggression
	W- 5/06	Mental Illness	Chapter 18
	M- 5/11	Mental Illness	Chapter 22
Test #3		Test #3 Wednesday, May 13th	10:30 pm – 12:45 pm

