



San José State University
Department of Psychology
PSYC/BIO 129-01,
Neuroscience (48620/50117), Fall 2022

Instructor:	Jill Citron, PhD
Email:	jill.citron@sjsu.edu
Office Hours:	Monday & Wednesday, 12:30 pm – 1:20 pm, and by appointment.
Office Location:	DMH 352 & Zoom https://sjsu.zoom.us/j/96512319685
Class Days/Time:	Monday & Wednesday, 3:00 pm – 4:15 pm
Classroom Location:	DMH 356
Prerequisites:	Either: (a) PSYC 30 and 3 units of BIO, or 9 units of BIO You must complete 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, office 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.

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 a Class Activity, Lab #,1and Exam #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 and Exam #2.

CLO3: *Students will be able to* -identify, describe, and communicate experimental approaches and associated empirical finding for various methodological approaches in neuroscience. Assessment for CLO will be conducted primarily in Hypothes.is and Exam #2.

CLO4: *Students will be able to* -think critically and creatively about neuroscience to address issues related to behavioral and mental health processes. This CLO will be assessed in Hypothes.is, Final Exam and paper assignment.

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 Lab #2, Exam and Case Study.

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 Hypothes.is activities, Lab #2, and the neuroscience paper assignment.

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 a member of society.

Goals for this course fall into three categories. Learning outcomes for the first part of the course are a general understanding of the philosophical issues driving much of contemporary neuroscience research, an understanding of mechanisms during brain development, and students are expected to develop a firm hold on biological foundational knowledge as it relates to the central nervous systems. The second category will

provide students with a detailed understanding of the sensory systems. The final section of the course, students will gain an understanding of how neural systems contribute to various behaviors ranging from motivation to learning.

It is strongly recommended that students use the Chrome Web Browser when using Canvas. Using Chrome will decrease the number of 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 on a regular basis.

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

Accessing 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*

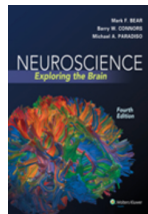
Password = *your current SJSUOne password*

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. The enhanced edition is not required but will provide you with additional resources to support your learning during the semester.

Additional readings will be posted on Canvas in PDF format. *A version of this text may be available on <http://libgen.rs/>*

Library Liaison

The SJSU library has a librarian who specializes in psychology (and other social sciences), and this librarian can serve as a very valuable resource for helping you to develop research ideas and locating appropriate research materials. The library also has an abundance of resources for doing psychology research:

Christa Bailey, 408-808-2422, christa.bailey@sjsu.edu, <http://libguides.sjsu.edu/psychology>

Classroom Protocol

Students are expected to always maintain a level of professional and courteous behavior. You are required to put your cell phone and other distractions away before the beginning of class. I expect you to be respectful of your fellow classmates and to receive the same respect in return. This includes introducing distractions and unrelated comments during class. Students not abiding by these policies will be asked to leave the class.

*During the creation of this syllabus, we are required to wear approved face masks in class to prevent the spread of Covid-19 and its variants. We may not like it, but we need to do it anyway. Please wash your hands throughout the day and use hand sanitizer frequently. We are all in this together and need to look out for one another. Should policy change at the university level, we will discuss how best to institute the changes in our class.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's catalog, <https://catalog.sjsu.edu/>, policy section. The Late Drop Policy is available at <https://www.sjsu.edu/aars/policies/latedrops/policy/>. Please be aware that there are changes due to COVID-19 SIP. Information about the latest changes and new is available at the Advising Hub at <https://www.sjsu.edu/advising/>

Attendance

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.

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 fundamental to course objectives; for example, students may be required to interact with others 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 to complete various assignments, 2 laboratory exercises, three examinations (two midterms and a final exam), a paper topic, and one research paper. SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

Anticipate that your grades in Canvas will continue to change throughout the semester. Do not contact me at the end of the semester asking if I will round up your grade. I want all of my students to succeed and will always round grades up (not down) when it is 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 forty-five hours over the length of the course. As an example, the expectation of work for a 3-credit course is 150 minutes of direct faculty instruction and six-hours of out-of-class student work each week.

Please review the following sources and policies, as well:

- University Syllabus Policy S16-9 at <http://www.sjsu.edu/senate/docs/S16-9.pdf>
- Office of Graduate and Undergraduate Programs' Syllabus Information web page at <http://www.sjsu.edu/gup/syllabusinfo/>

Make-up Exams and Late Assignments

There will be no late make-up exams or late work accepted (except for a documented medical illness or prior approval). Please check your schedule to ensure that you have no conflicts with due dates. **Again, no extensions for assignment will be given except in cases documented emergencies or serious illness.**

Academic integrity

Academic integrity is essential to the mission of San Jose State University. As such, students are expected to produce their own work (except when collaboration is expressly permitted by the course instructor) without the use of any outside resources. Students are not permitted to use old tests, quizzes when preparing for exams, nor may they consult with students who have already taken the exam. When practiced, academic integrity ensures that all students are fairly graded. Violations to the Academic Integrity Policy undermine the educational process and will not be tolerated. It also demonstrates a lack of respect for oneself, fellow students, the course instructor, and can ruin the university's reputation and the value of the degrees it offers. The Student Conduct and Ethical Development is available at <https://www.sjsu.edu/studentconduct/>. We will be using Turn-It-In to ensure academic integrity of your writing.

GRADING INFORMATION AND MAJOR ASSIGNMENTS:

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 that you can earn during the semester.

Assignment	How Many?	Points Per Assignment	Total Points	<small>Approximate</small> % of Final Grade
Case Study Presentation	1	15	15	5%
Infographic	2	15	30	10%
Exams	3	40	120	35%
Lab Exercises	2	15	30	10%
Class Exercises	3	10	30	10%
Hypothesis	3	10	30	13%
Research topic	1	5	5	1%
Research Paper	1	50	50	15%
Name Coach	1	5	5	1%
Total:			315	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

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

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 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– Check for different ways to access these services during the COVID-19 SIP.

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/>

Major Assignments

Below is a tentative list of important course events. Instructions for each assignment is on Canvas.

Lab #1

Date: Wednesday, September 7th

Infographic #1

Date: Wednesday, September 14th

Hypothes.is #1

Date: Wednesday, September 21st

Exam 1

Date: Wednesday, September 28th

Infographic #2

Date: Monday, October 3rd

Hypothes.is #2

Date: Wednesday, October 12th

Exam #2

Date: Monday, October 24th

Lab #2

Date: Monday, November 14th

Research Report

Date: Monday, November 21st

Case Study Presentations

Date: Monday, November 28th, Wednesday, November 30th, and Monday, December 5th.

Final Exam

Date: Thursday, December 8th 12:15 – 2:30 pm

COURSE SCHEDULE

Note: This schedule is subject to modification (with fair warning) as the instructor deems necessary.

Week	Date	Topics	Reading Due for Class	Assignment
1	M- 8/22	<ul style="list-style-type: none"> • Course Introduction • Review of Syllabus • Course Requirements • Study Skills • Review of Covid-19 Safety Protocols 		<u>Due:</u> Name Coach -due 9/1
**	PART ONE - FOUNDATIONS		**	**
	W- 8/24	Neurons & Glia	Chapter 2	
2	M- 8/29	Neuronal Membrane at Rest	Chapter 3	
	W- 8/31	The Action Potential	Chapter 4	
3	M- 9/5	<i>No Class – Veterans Day</i>		
	W- 9/7	Synaptic Transmission	Chapter 5	Lab #1
4	M- 9/12	Neurotransmitter Systems	Chapter 6	Infographic #1
	W- 9/14	The Structure of the Nervous System	Chapter 7	Hypothes.is #1
5	M- 9/19	An Illustrated Guide to Human Neuroanatomy	Appendix: p.219	
	W- 9/21	Exam 1	Chapters 1-7 & Appendix	In Class Bring a scantron #2 pencil
**	PART TWO– SENSORY AND MOTOR			**
6	M- 9/26	The Chemical Senses	Chapter 8	
	W- 9/28	The Eye	Chapter 9	
7	M- 10/3	The Central Visual System	Chapter 10	Infographic #2
	W- 10/5	No Class		
8	M- 10/10	The Auditory and Vestibular System	Chapter 11	
	W-10/12	The Somatic Sensory System	Chapter 12	Hypothes.is #2
9	M- 10/17	Spinal Control of Movement	Chapters 13	
	W- 10/19	Brain Control of Movement	Chapter 14	Submit Research Topic Idea
10	M- 10/24	Exam 2	Chapters 8-14	In Class Bring a scantron #2 pencil

**	PART THREE – THE BRAIN AND BEHAVIOR			**
	W-10/26	Chemical Control of the Brain & Behavior	Chapter 15	
11	M-10/31	Frightful Neuroscience		
	W-11/2	Motivation	Chapter 16	Case Study Team Formation
12	M-11/7	Sex and the Brain	Chapter 17	
	W-11/9	Brain Mechanisms of Emotion	Chapter 18	
13	M- 11/14	Brain Rhythms and Sleep	Chapter 19	Lab #2
	W- 11/16	Language	Chapter 20	Hypothesis #3
14	M- 11/21	No Class Thanksgiving		Research Report
	W- 11/23	No Class Thanksgiving		
15	M- 11/28	Case Studies		Team #1, A, B, & C
	W- 11/30	Case Studies		Team #2, A, B, & C
	M- 12/5	Case Studies		Team #3, A, B, & C
Final	R-12/8	Cumulative Final Exam - 12:15 pm - 2:30 pm		In Class Bring a scantron #2 pencil