

# SYLLABUS for BIOLOGICAL BASES OF BEHAVIOR

DATE: Spring 2023

COURSE NUMBER AND TITLE: PSYC/SW 226.01 Biological Bases of Behavior

CREDIT HOURS: 3

TIME AND PLACE: 12:00 p.m. – 1:15 p.m. Tues/Thurs, MLH 220

INSTRUCTOR: Teri Rust, Ph.D.

OFFICE: Spalding 219, phone: 792-2276, e-mail: [trust@lcsc.edu](mailto:trust@lcsc.edu)

OFFICE HOURS: Mon/Wed: 9:00-10:15, Tues/Thurs: 1:30-2:45 *and by appointment*

**Course Description:** This course is designed to introduce students to a field of neuroscience that is variously referred to as physiological psychology, biopsychology, behavioral biology, or behavioral neuroscience. The main focus is on gaining and/or demonstrating an understanding of the relationships between central nervous system processes and human behavior. Pre-requisite: [PSYC-101](#); and [ENGL-102](#) or [ENGL-109](#).

## Text:

Required: Kalat, J. W. (2019). *Biological psychology* (13th ed.). Cengage.

Recommended: American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). Author.

## General Course Objectives

We will cover the following major concepts so that upon completion of the course, you will be familiar with:

1. the basic types, structures, and functions of neurons and synapses;
2. the basic anatomy of the human nervous system and methods for investigation;
3. the effects of various drugs on nervous system functioning;
4. the development of the brain;
5. the lateralization of functions and language;
6. the basic function and development of vision;
7. the processes and functions of sleep, and the various sleep disorders;
8. the function of hormones in sexual development and behavior;
9. the biological foundations of emotions (stress);
10. the brain areas associated with learning and memory;
11. the mechanisms and influencing factors in recovery from brain damage;
12. the biological foundations of mood disorders and schizophrenia;
13. APA style referencing.

**A note to persons with disabilities.** If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. My office location and office hours are printed above.

**Diversity Vision Statement:** Regardless of race, color, age, sex, religion, national origin, disability, veteran status, or sexual orientation, you will be treated and respected as a human being.

**Program requirements:** Students have the responsibility for knowing their program requirements, course requirements, and other information associated with their enrollment at LCSC. Students should review the LCSC General Catalog and the LCSC Student Handbook for more information.

**Academic Dishonesty:** Academic dishonesty, which includes cheating and plagiarism, is not tolerated at LCSC. Individual faculty members may impose their own policies and sanctions regarding academic dishonesty after offering the student an opportunity to explain his or her actions. Sanctions imposed by the faculty member are limited to grades on the assignment(s) in question and/or on the course grade. On matters of academic dishonesty, faculty members do not have the authority to dismiss a student from class indefinitely nor to disenroll a student from a program without corroboration from a Division Chair (or program ethics committee where applicable), the appropriate instructional dean, and the Vice President for Student Affairs. Students who are accused of being academically dishonest may be referred to the VP for Student Affairs for official disciplinary action.

**Masks:** Face covering expectations at Lewis-Clark State College:

- You may choose to wear cloth or disposable face coverings while on campus.
- Vaccination is encouraged, and there are opportunities to get conveniently vaccinated/boosted in our community.
- If you test positive or have COVID-type symptoms, please stay home.

**Attendance:** Attendance is expected. It will be YOUR responsibility to sign in each day you attend in-person. If you know ahead of time that you will be gone, please let me know in writing (on the sign-in sheet or via e-mail). Six (6) absences will result in an F regardless of points earned or reasons for absences. If there are circumstances that will interfere with your regular attendance, please register for the online version of the course.

This is an in-person class. I do not plan to offer Zoom as an option for attendance. It is NOT an optimal way to attend or learn, for those on Zoom or for those in the classroom.

**No texting, cell phones, or internet activity** during class. You may NOT use a computer during class without FIRST sending me an **e-mail** to request permission, present your reasons, and receive my approval, which is not guaranteed.

**Withdrawing:** The deadline for withdrawing from the class with a W on your transcript is Thursday, **Apr 6, 2023**. After that, a petition is required, it costs money, and it is not necessarily approved. Withdrawing can negatively impact your financial aid, so please be aware of all consequences.

**Assignments:**

American Psychological Association (APA) referencing style: These assignments are NOT OPTIONAL and there is a “mastery” level requirement. These are completed early in the semester. If you do not submit them, you should drop the course.

WRITING: There will be one short, summary paper and one major (5-8 pages; 100 points) writing assignment. Details will be made available soon. These writing assignments are NOT OPTIONAL. If you do not submit the Summary Paper, you should drop the course. If you do not submit the Term Paper, the highest grade you can possibly receive in the course is a D.

ALSO: **Required Service Activity:** You must complete 1 service activity between **Jan 6 and May 5**. Ideally this will be in the Valley community. Clear any exceptions with me before submitting your paper. **Required Learning Activity:** You must complete 1 learning activity (outside normal classroom learning) between **Jan 6 and May 5**. Becoming involved in these ways in the local and campus communities enhances the college experience and improves collegiate success. Some options will be posted in Canvas for these activities, but there are other acceptable options. Please send an e-mail to ask if a particular option is acceptable if it is not posted in Canvas. You must submit a 1-page, double-spaced summary of the activity and your reaction to it **within 4**

**weeks of the activity.** These papers must be submitted through Canvas, by 11:59 p.m. Friday, **May 5, 2023**. Do NOT wait until the last minute and expect me to find an activity for you or approve of activities not posted or previously approved. Given the due date, the Required Service and Required Learning Activities will be not accepted late.

There are also several worksheets. Assignments are due at the beginning of class on the due date. Assignments turned in after class will be considered late. Late assignments lose 10% for each day/part of day they are late. After one week, they are not accepted. I only accept certain assignments electronically. If an assignment is to be submitted as hard copy, and you submit it electronically (for whatever reason), you will lose 10% of the points. I **do not** accept **any late** submissions after 5:00 p.m. on the Friday (**May 6, 2023**) before finals' week. Extra credit options are NOT accepted late.

**Tests:** Four tests will be given in this course. They will be multiple choice. The tests will be taken in person by everyone.

**MISSING A TEST:** The only acceptable reasons to miss an exam are *extreme* illness, absence while representing the college, or death in the family. In any case, I **MUST** be notified prior to the beginning of class to take a make-up. Make-ups are taken in the Testing Center in the Library building. The Testing Center requires an appointment for proctored exams. A 24-hr notice and ID are required (208-792-2100, testing@lcsc.edu). If English is not your first language, you may use a web-based translation dictionary by taking your tests at the Testing Center. Please arrange this through me at least a week before test time.

I *do not* "drop" a test. We will finish with a Comprehensive Exam. If you get a better score on the comprehensive exam than your worst unit test score, I will replace your lowest score with your score from the Comprehensive Exam. If you do worse on the comprehensive exam than your lowest unit test score, you will lose 1 point for every 2 points you score below your lowest unit test score.

Do **not** leave for home or vacation before any test and expect to take it early. I do not allow tests to be taken early. I also do not allow students to do anything "more" once final exam week begins, so do NOT ask.

#### **Quizzes:**

- There are 3 e-mail quizzes worth 5 points each. I will send them after tests 1, 2, and 3.
- There will be multiple (at least 12) in-class quizzes, and I will count your 5 highest scores. Research shows that testing/quizzing improves retention of information (McDaniel et al., 2007). If you are absent on a day we have an in-class quiz, that will just be a quiz that "drops out" and won't be counted as one of your best 5.

**Extra credit:** There are options for extra credit in this course. The unit crossword puzzles are each worth a possible 4 bonus points, due by class time on the day of tests. You may also earn 5 bonus points for participating in a (just one) Service Activity and 5 bonus points for an (just one) extra Learning Activity (I will provide a list of some options) and submitting a paper about each (a 1-page summary of the activity/event and your reaction to it). These papers must be submitted through Canvas, by 11:59 p.m. Friday, **May 5, 2023**. Extra credit options are NOT accepted late.

**Grading:** You may figure 90%, 80%, 70% cut-offs for grades. I do use +/- grading for scores that fall close to the cutoffs. You can monitor your grades through Canvas.

Tentative Assignments	Points
2 APA worksheets @ 20 each	40
Required Service Activity	10
Required Learning Activity	10
Summary Paper	20
Paper Topic	5
References & List	20
Term Paper	100
Term Paper Rubric	5
Frame Games 4 @ 10 pts each	40
3 e-mail quizzes @ 5 pts each	15
5 best in-class quizzes @ 5 pts each	25
4 Tests @ 50 pts each	200
Total	490

Points totals could change depending on extenuating circumstances.

Grades and what they mean:

Points	Grade	Meaning
441-490	A	Distinguished or Exceptional
392-440	B	Superior
343-391	C	Average or Minimal Expectation
294-342	D	Below Average
Less than 294	F	Failing

**Please feel free to stop by my office, call, or e-mail, if you need any assistance.**

McDaniel, M. A., Anderson, J. L., Derbish M. H., & Morrisette, N. (2007). Testing the testing effect in the classroom. *European Journal of Cognitive Psychology*, 19(4/5), 494-513.

<https://doi.org/10.1080/09541440701326154>

# SPRING 2023

## Biological Bases of Behavior

Day	Weekday	Date	Topic
1	Tues	Jan 17	Intro
2	Thurs	Jan 19	APA referencing style
3	Tues	Jan 24	<b>APA1</b> Due; Intro: Animal Research; Ch 4.1:Genetics
4	Thurs	Jan 26	APA referencing style
5	Tues	Jan 31	<b>APA2</b> Due; Ch 1: Nerve cells & Impulses--1.1:Cells; 1.2:Impulses
6	Thurs	Feb 2	APA referencing style
7	Tues	Feb 7	Ch 2: Synapses--2.1:Synapse; 2.2:Chemicals at Synapse
8	Thurs	Feb 9	Ch 14.1:Substance Abuse & Addiction
<b>9</b>	<b>Tues</b>	<b>Feb 14</b>	<b>Test 1: Intro, 4.1, Ch1, Ch2, 14.1 &amp; APA refs</b>
10	Thurs	Feb 16	<b>Summary Paper Due</b> ; Ch 3: Anatomy--3.1:Structure; 3.2:Cerebral Cortex
11	Tues	Feb 21	Ch 4.2:Development of the Brain
12	Thurs	Feb 23	Ch 13: Cogn Fcn--13.1:Lateralization
13	Tues	Feb 28	Ch 13: Cogn Fcn--13.2:Language
14	Thurs	Mar 2	<b>Paper Topic</b> ; Ch 5: Vision--5.1:Visual Coding
15	Tues	Mar 7	Ch 5.2: only Devel of Visual Cortex (170-173); Ch 6.2: only Pain (202-207)
<b>16</b>	<b>Thurs</b>	<b>Mar 9</b>	<b>Test 2:Ch 3(1,2), 4.2, 13(1,2), 5(1,2), 6(2)</b>
17	Tues	Mar 14	Ch 8: Wakefulness & Sleep--8.1:Rhythms; 8.2:Stages
18	Thurs	Mar 16	Ch 8: Wakefulness & Sleep--8.2:Stages; 8.3:Why?
19	Tues	Mar 21	<b>References &amp; List</b> ; Ch 10: Reproductive Behav--10.1:Sex & Hormones
20	Thurs	Mar 23	Ch 10: Reproductive Behav--10.2:Sexual Variations
	<i>Mon-Fri</i>	<i>Mar 28-31</i>	<i>Spring Break</i>
21	Tues	Apr 4	Ch 11: Emotional Behav--11.1:Emotions; 13.4:Social Neuroscience
22	Thurs	Apr 6	<b>Final Paper Due</b> ; Ch 11: Emotional Behav--11.2:Attack & Escape
23	Tues	Apr 11	Ch 11: Emotional Behav--11.3:Stress
<b>24</b>	<b>Thurs</b>	<b>Apr 13</b>	<b>Test 3: Ch 8, 10, 11, 13.4</b>
25	Tues	Apr 18	Ch 12: Learning & Memory--12.1:Learning, Memory, Amnesia
26	Thurs	Apr 20	12.1:Learning, Memory, Amnesia; Ch 4.3:Plasticity
27	Tues	Apr 25	Ch 14: Psych Disorders--14.2:Mood Disorders
28	Thurs	Apr 27	Ch 14: Mood & Schizo--14.2:Mood & 14.3 Schizophrenia
29	Tues	May 2	Ch 14: Mood & Schizo--14.3:Schizophrenia
30	Thurs	May 4	Finish
<b>Final</b>	<b>Thurs</b>	<b>May 11</b>	<b>Test 4: Ch 12(1,2), 4.3, 14(2,3)</b>
			<b>&amp; Comprehensive</b>