

SW 226/PSYCH 226: Biological Basis of Behavior
Fall 2009 - 3 Semester Hours
Monday & Wednesday 10:30-11:45

Lewis-Clark State College
Social Work Program
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Office Hours: Tuesday 1:30 – 3:30, and Wednesday 8:30-10:30. Other times by appointment

Mission Statement

The mission of the social work program at Lewis-Clark State College is to prepare students for entry-level generalist practice. Through courses, internships, research projects, and student activities delivered by traditional and nontraditional methods (technology), the program fosters in its students a celebration of differences among people, and a belief that respecting these differences enriches the quality of life for all. We are committed to the preparation of professional social workers who possess the knowledge, skills, and values to address the needs and potential of individuals, families, groups, communities, and organizations. Drawing on an ecological and liberal arts based background and a strengths based perspective, the program prepares students for the pursuit of a more just, humane society. Graduates are prepared for practice particularly with the oppressed and at-risk members of society. Graduates are expected to practice from a set of ethical principles inherent in the social work profession, including the recognition that professional development is a life-long learning process.

Note: Last day to add class(es) or to drop without “W” grade on transcript is September 4, 2009.
Last day to withdraw from class(es) or college for the semester is October 30, 2009.

COURSE DESCRIPTION: Introduces students to a field of neuroscience that is variously referred to as physiological psychology, biopsychology, behavioral biology, or behavioral neuroscience. The main focus is to gain and/or demonstrate an understanding of the relationships between central nervous system processes and human behavior. Application in assessment of client systems will also be presented.

I. INTRODUCTION AND OVERVIEW

This course is designed to introduce students to a field of neuroscience that is variously referred to as physiological psychology, biopsychology, behavioral psychology, or behavioral neuroscience. The main focus is on gaining and/or demonstrating an understanding of the relationships between the central nervous system processes and human behavior.

II. PURPOSE OF THE COURSE IN THE CURRICULUM

Traditional schools of social work and psychology (i.e. psychodynamic, behaviorism, and social learning theories) directed very little attention to the connection between human behavior and neurological processes. Since the late 1980’s in conjunction with advancements in neuropsychology, electrophysiology, and neuroimaging technologies, research has expanded dramatically demonstrating the connection between neuroanatomy,

normative human behavior patterns, and social dysfunction. The purpose of this course in the psychology and social work curriculum is to provide a fundamental understanding of the biological processes and the impact of these processes on human behavior within the context of the social environment.

III. COURSE OBJECTIVES

Social Work Program Goals Addressed in this Course:

1. To provide learning experiences and opportunities in a variety of settings that develop generalist practice social work knowledge and skills needed to achieve BSW career objectives and meet client needs.
2. Demonstrate greater awareness of diversity of one's self and others (including ethnicity, race, gender, class, culture, age, physical ability, spirituality, and sexual orientation), and how these diversities influence clients, ethical practice, social policy and social and economic justice.
5. Engage and require students to develop, use, and critique research for evaluating practice and adding to the knowledge base of the profession.
6. Ensure students have learned to develop and apply assessment, intervention, and evaluation skills differentially based on diversity with a strength-based perspective from an ecological point of view.

Course Objectives: Upon completion of this course students will be able to:

1. Identify the basic structures and function of the human nervous system and their impact on human behavior and social function.
2. Demonstrate key stages of brain development and the normative developmental changes that occur at each developmental stage.
3. Identify the impact of basic pharmacology on the functions of the nervous system.
4. Demonstrate understanding of the various parts of the cerebrum/lower brain and their influence on language, vision, and motor control.
5. To demonstrate knowledge the interaction of the nervous system has in emotional regulation, learning, and memory.
6. Identify the processes and functions of sleep and its impact on social function.
7. Discuss the function of hormones in sexual development and human behavior.

8. Demonstrate knowledge regarding the role of biological processes in psychopathology, social dysfunction, and traumatic brain injury.

9. Discuss the ethical considerations of acquiring and maintaining knowledge of the biological processes effecting human behavior in order to enhance the assessment and interventions social work can offer.

IV. TEXTS AND REQUIRED READING

REQUIRED:

Kalat, J.W. (2007). *Biological Psychology*. (10th ed.). Belmont, CA: Thomson Wadsworth.

American Psychological Association. (2010). *Publication manual of the American Psychological Association*. (6th ed.). Washington, D.C.: Author.

V. TEACHING METHODS/CLASS CLIMATE

The primary teaching approach in this class will be collaborative learning. Materials in the course will be presented through discussion, lectures, group work, and media presentations. Students will be responsible for all materials presented in class and all outside assignments. Assigned readings and topics for the day are outlined in the Class Schedule and students are expected to come to class prepared to discuss the assignments. An absence is not an excuse for not coming to class prepared to be actively involved.

Social and Economic Justice: The faculty members of the Social Work Program believe that we all share a responsibility for championing social and economic justice for all members of society. Guided by the Code of Ethics, social workers should strive to:

- ◆ Eliminate personal and institutional discrimination,
- ◆ Ensure access to needed resources and opportunities for all persons,
- ◆ Expand options and opportunities for everyone, but especially for persons who are disadvantaged or disenfranchised,
- ◆ Respect cultural diversity in society,
- ◆ Advocate changes that improve social conditions and promote social justice,
- ◆ Encourage participation in the democratic process, and
- ◆ Encourage people to develop their own voice.

There will be times during this course when societal "isms" or prejudicial attitudes and discriminatory practices are examined. Because of our commitment to social and economic justice, we are open to hearing all views and all perspectives will be carefully examined. Students are expected to be respectful of the opinions of others while at the same time

striving to attain the ideals of social justice.

Students in a professional program should conduct themselves as professionals in relation to the class session and assignments. It is not acceptable to be late for classes except in unusual circumstances. Frequent lateness or other unprofessional class conduct is likely to result in a lowered grade. Students are also evaluated on their personal and professional behavior or conduct in this class as described in the Student Handbook. Please refer to the Handbook for further clarification.

Students with Special Needs: The Americans with Disabilities Act of 1990 requires that the College make reasonable accommodation to persons with disabilities as defined in the act. Students with a disabling condition seeking an academic accommodation must contact the Office of Student Life, Room 111, Reid Centennial Hall. The Disability Services Coordinator will inform faculty of specific classroom and course accommodations consistent with ADA guidelines. Please inform the instructor during the first week of class regarding reasonable accommodations you require to successfully complete this course.

Shared Client and Agency Information: In the classroom, students and professors will occasionally discuss clients and agencies. In these discussions, it is expected that information about clients and agencies should be disguised or eliminated, if clients could be identified, and that this information is to be held in confidence, within the bounds of the Code of Ethics. You must disguise the identity of clients in written assignments including changing the name of the client.

Course Web Site: There is a course website through LCSC Blackboard. The site contains all lecture power points, additional resources including links to useful websites, and the study guides for the quizzes. A copy of the syllabus is on the web page and all grades will be posted on the web page.

Textbook Companion Website: The textbook publishers have provided a companion website for students. There are practice questions for each chapter. Some questions on each of the quizzes will be taken from the list of questions provided on the companion website. The companion website is www.cengage.com/psychology/kalat.

VI. CLASS ASSIGNMENTS AND GRADING PROCEDURES

Details about class assignments can be found in Part VII of this syllabus.

<u>ASSIGNMENT</u>	<u>POINTS</u>	<u>COURSE OBJECTIVES</u>
Build an Action Potential	50	1,2,4
Build A Brain	50	1,2,4
Build A Muscle Response	50	1,2
Sleep Log	50	6,8
Sexuality Paper	50	7,9
Quiz 1	100	1-9
Quiz 2	100	1-9

Quiz 3	100	1-9
Academic Paper	300	1-9
Final Exam	150	1-9
	1000	

Grading Scale

A	1000-950 points	C+	819-790 points
A-	949-910 points	C	789-760 points
B+	909-880 points	C-	759-730 points
B	879-850 points	D	729-601 points
B-	849-820 points	F	600 points and below

Grading Policy

All grades will be assigned based on total number of points earned by students for the assignments. Each assignment is accompanied by a “grading criteria” matrix. Points earned from quizzes are based on the number of correct answers. Points earned on other assignments are based on the student’s demonstration of ability to master each of the items on the grading criteria.

Policy Regarding GPA

Social work majors must achieve a C- in all required social work courses. In the event that a student does not achieve at least a C- in the course, the student will be required to retake the course. Additionally, students must maintain an overall GPA of 2.5 and a 2.7 Cumulative GPA in social work courses.

Deadline for Submission of Class Assignments

1. Assignments must be submitted to the instructor at the beginning of class unless otherwise arranged. Faxing class assignments is **NOT** permitted. Emailing assignments to the instructor must be arranged prior to the due date.
2. Tests and assignments are due on the dates listed on the syllabus or as scheduled by the instructor of this course. On the rare occasion of a medical, personal, or family emergency, the student may write a letter of explanation requesting permission to hand in a late paper. Discretion of late paper acceptance is entirely up to the instructor. Grade will automatically be reduced by 10% of the total points per day.
3. In the event a quiz or test is missed, to make up the work, the student must contact the instructor and request permission to make up the work assigned by the instructor. Makeup work is due within 7 days of the test, or the student will receive a failing grade for the test. A student may not miss the final exam, as there will be no make up work.
4. Only work submitted before the close of the last scheduled class session of the course

will be accepted for inclusion in the grade for that semester.

5. Students have the option to re-write any assignment until they receive the grade they want. In order to take advantage of this option, the assignment must be submitted on time and the student must arrange to meet with the instructor within one week after receiving the graded paper.
6. Extra-Credit: There is no opportunity to obtain extra-credit in this course.

Policy Regarding Course Incompletes

Students are expected to complete all work before the final session of the class. Incompletes are not granted automatically. A grade of “I” may be assigned only in cases of illness, accident, or other catastrophic occurrence beyond the student’s control. Students should have 75% of the course work completed in order to qualify for an incomplete. It is the responsibility of the student to request, in writing, an Incomplete prior to the end of the term. All work must be completed by the deadline specified by the instructor, which must be on or before the last day of the fourth week of classes in the next term, including summer session. Students who fail to complete the required work by the agreed upon date will be assigned a grade of “F”.

Academic Honesty and Plagiarism*

The following acts of academic dishonesty are not acceptable:

- Cheating: using or attempting to use unauthorized materials, information, or study aids in any academic exercise (e.g., an exam).
- Fabrication: unauthorized falsification or invention of any information or citation in an academic exercise (e.g., a paper reference).
- Plagiarism: representing the words or ideas of another as one’s own in any academic exercise (e.g., failing to cite references appropriately or taking verbatim from another source).
- Facilitating academic dishonesty: helping or attempting to help another to commit academic dishonesty (e.g., allowing another to copy from your test or use your work). **In addition to action by the professor, all incidents will be reported to Student Affairs.**

Professional Writing Standards

All printed work submitted to this professor should be prepared at a college standard of professional editing in accordance with the Publication Manual of the American Psychological Association (6th ed.). Therefore, allow sufficient preparation time for proofreading and correction of typos, misspellings, and grammatical errors.

References: All reference material must be from “peer” reviewed scholarly journals, edited books, official government documents, or reliable agency and organizational reports and

documents approved by the instructor. **Newspapers, internet sites such as “Wikipedia”, and non-peer reviewed reference material will not be accepted for assignments and will be returned to the student without a grade.**

The reason for these expectations is that professionals are often judged based upon the quality of their written work. Carelessness in spelling and editing suggests that there will also be mistakes in the substance of the work. Therefore, written work, which has misspellings and other editing problems, will be graded down on this basis alone.

Note: If you need help with your writing skills, the Writing Center may be able to assist you in improving them. The efforts you make will help you with your courses at LCSC as well as throughout your professional career because you will continue to be judged by other professionals on the basis of your written work.

The instructor reserves the right to waive one or more of the policies listed above in rare, but special, circumstances.

VII. CLASS SCHEDULE*

MONDAY	WEDNESDAY
8/24 Topic: Course Introduction Review of Syllabus APA Guidelines Why do I need to know this stuff? Course Objectives: 1-9	8/26 Topic: The Major Issues Course Objectives: 1,2,9 Read: Chapter 1
8/31 Topic: Nerve Cells & Nerve Impulses Course Objectives: 1 & 2 Read: Chapter 2	9/2 Topic: Nerve Cells & Nerve Impulses – Action Potential Course Objectives: 1 & 2 Read: Chapter 2 <u>In Class Graded Assignment – Action Potential</u>
9/7 <u>LABOR DAY – NO CLASS</u>	9/9 Topic: Synapses & the Synaptic Self Course Objectives: 1-3 Read: Chapter 3
9/14 Topic: Neurotransmitters & Effects of Drugs Course Objectives: 1-3 Read: Chapter 3	9/16 Topic: Anatomy of the Nervous System Course Objectives: 1,2,4,5,8 Read: Chapter 4
9/21 <u>QUIZ 1 – CHAPTERS 1-3</u>	9/23 Topic: Anatomy of the Nervous System- Brain damage and psychopathology Course Objectives: 1,2,4,5,8,9 Read: Chapter 4

	<u>In Class Graded Assignment Build-A-Brain</u>
9/28 Topic: The Development of the Brain Course Objectives: 1,2,3,8 Read: Chapter 5	9/30 Topic: The Plasticity of the Brain & Mechanism of Recovery Course Objectives: 1,2,3,8,9 Read: Chapter 5
10/5 Topic: Vision and Hearing Course Objectives: 2,4,5 Read: Chapter 6 – pp.152-157, 184-190 Chapter 7 – pp.196-203	10/7 Topic: Pain Course Objectives: 2,4,5 Read: Chapter 7 - pp. 205-213
10/12 Topic: Movement Course Objectives: 1,6,8 Read: Chapter 8	10/14 QUIZ 2 – Chapters 4-7
10/19 Topic: Disorders of Movement Course Objectives: 1,6,9 Read: Chapter 8 <u>In Class Graded Assignment Construct a Muscle</u>	10/21 Topic: Wakefulness and Sleep Course Objectives: 1,6,8 Read: Chapter 9
10/26 Topic: Internal Regulation Temperature Eating Disorders Course Objectives: 1,5,8 Read: Chapter 10 pp. 290-295 & 300-313	10/28 Topic: Reproductive Behavior Course Objectives: 1-9 Read: Chapter 11 – pp. 325-326 & 329-340
11/2 Topic: Emotional Behaviors Course Objectives: 1,2,5,7,8,9 Read: Chapter 12 Assignment Due: Sleep Log	11/4 Topic: Emotional Behaviors Course Objectives: 1,2,5,7,8,9 Read: Chapter 12
11/9 Topic: Memory and Learning Course Objectives: 1,2,5,8 Read: Chapter 13 Assignment Due: Sexuality Paper	11/11 Topic: Cognitive Functions Course Objectives: 1,2,5,8 Read: Chapter 14 Distribute Quiz 3 – Take Home
11/16 Topic: Cognitive Functions Course Objectives: 1,2,5,8 Read: Chapter 14	11/18 Topic: Lateralization and Language Course Objectives: 1-9 Read: Chapter 14 Return Quiz 3

Thanksgiving Break	Thanksgiving Break
11/30 Topic: Consciousness and Attention Course Objectives: 1-9 Read: Chapter 14	12/2 Topic: Mood Disorders Course Objectives: 1-9 Read: Chapter 15 Assignment Due Academic Paper
12/7 Topic: Psychological Disorders Course Objectives: 1-9 Read: Chapter 15 – pp. 459-480	12/9 Topic: Psychological Disorders Course Objectives: 1-9 Read: Chapter 15
12/14 Final Exam 10:30-12:30	

(*The instructor may make changes in the class schedule. All changes will be made in writing and distributed during class. Students are responsible for all changes made in the schedule whether or not they were present when the changes were distributed.)

VIII. DESCRIPTIVE MATERIAL REGARDING ASSIGNMENTS

1. Quizzes (Objectives 1 - 9): There will be a total of three tests, 2 in class and one take home incorporating material from both the textbook and classroom content. Tests will be closed book, multiple-choice, true false, matching and/or short answer questions. Quizzes are worth 100 points each. See Class Schedule for dates of quizzes.

2. Final Exam (Objectives 1 - 9) (150 points): The final exam is a comprehensive closed book exam.

3. Academic Paper (Objectives 1-9) (300 points): Students will be expected to select a topic relating to some form of psychopathology or neurological disorder. (Some good topics include: Depression, ADD, Anxiety Disorders, Sleep Disorders, Schizophrenia, Bipolar Disorder, Strokes, MS, Alzheimers, Dementia, Chronic Pain, Fetal Alcohol Syndrome, Addiction. For other topics check with the instructor.) The student is to write an 8-10 page paper in APA format with proper APA citations and utilizing a minimum of five academic, peer-reviewed sources. This paper is due December 2.

Outline for Paper

- Introduction of Topic (1 page)
- Biological Processes Contributing to the Presenting Concern (Brain Function, Neurotransmitters, Hormones, etc) (2-3 pages)
- How is the presenting concern manifested in daily life and what stressors from the social environment exacerbate the symptoms? (3-4 pages)

- Treatment methods of the disorder and how this interplays with biological etiology of the disorder (Justify the treatment via research). (2-3 pages)
- References Cited – using proper APA citations for all materials cited in your paper

Submit your paper and attach copies of 5 (five) peer-reviewed articles cited in your paper. No paper will be accepted without copies of the cited articles.

Students may not submit a paper that was submitted in another college course nor a paper written by another person. It is permissible and encouraged to have the paper reviewed by the Writing Center or another person for clarity and grammar.

Grading Rubric:

Quality of research	50 points
Completeness	150 points
Clarity	50 points
Critical Thinking	25 points
<u>APA Formatting</u>	<u>25 points</u>
	300 points

4. Mini Assignments: (Objectives 1,2,4,6,7,9)

- **Anatomical Models** - There are three in-class assignments. For each of these assignments students will work together to construct an anatomical model using the materials provided by the instructor. Attendance is required to obtain points for this project. Each of these assignments is worth 50 points.
- **Sleep Log (Objective 6) (50 points):** Students will be required to keep a sleep log for one week. The outlined format will be reviewed in class prior to the assignment. Students are required to write a one-page response paper incorporating their understanding of sleep and patterns of sleep from chapter 9. This assignment is due November 2.
- **Personal Response Paper Regarding Sexuality (Objectives 7, 9) (50 points)** Review the biological basis of sexuality in Chapter 11 and then write a three to four page response paper and include the following content:
 - 1.) How does your understanding of the biological basis of sexuality affect your view of gender, sexual identity, and/or sexual orientation?
 - 2.) What are societal attitudes regarding the topic and how might these attitudes be affected by the biological evidence?
 - 3.) This is a personal response paper; therefore it will be graded based on how

well you support your thoughts and ideas and not on your attitudes or values.

4.) The paper is due November 9.

IX. ATTENDANCE POLICY

Students are expected to attend all scheduled classes. Those students unable to attend are responsible for all work and class material. Missing fifteen percent (15%) or more of the scheduled class sessions is considered excessive absences, and will result in the reduction of your final grade by 1 (one) letter grade.

X. FINAL EXAMINATION POLICY

There is a comprehensive final exam scheduled for this course. The final exam is scheduled for Monday, December 14.

XI. BIBLIOGRAPHY

Aamodt, S., & Wang, S. (2008). *Welcome to your brain*. New York: Bloomsbury.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders-IV-TR*. (4th ed.) Washington, DC: Author.

Applegate, J. S., & Shapiro, J. R. (2005). *Neurobiology for clinical social work: Theory and practice*. New York: W.W. Norton.

Ginsberg, L., Nackaerud, L., & Larrison, C. R. (2004). *Human biology for social workers: Development, ecology, genetics and health*. Boston: Allyn & Bacon.

Kandel, E. T. (2006). *In search of memory: The emergence of a new science of mind*. New York: W. W. Norton & Co.

Kramer, P. D. (1993). *Listening to Prozac: A psychiatrist explores antidepressant drugs and the remaking of the self*. New York: Viking Books.

LeDoux, J. (2002). *Synaptic Self: How our brains become who we are*. New York: Penguin Books.

Levitin, D. J. (2006). *This is your brain on music: The science of human obsession*. New York: Dutton.

Lilienfeld, S. C., Lynn, S. J., & Lohr, S. J. (2003). *Science and pseudoscience in clinical psychology*. New York: Guilford Press.

- Ramachandran, V. S., & Blakeslee, S. (1998). *Phantoms in the brain: Probing the mysteries of the human mind*. New York: Harper Collins.
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- Sacks, O. (1995). *An anthropologist on Mars*. New York: Vintage Books.
- Sacks, O. (1985). *The man who mistook his wife for a hat and other clinical tales*. New York: Summit Books
- Schwartz, J. M., & Begley, S. (2002). *The mind and the brain: Neuroplasticity and the power of mental force*. New York: Harper Collins.
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- Taylor, J. B. (2006). *My stroke of insight: A brain scientist's personal journey*. New York: Plume.
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