Gavilan College
Social Science Department (Psychology)
PSYC 1B: Biological Psychology (CRN 10149)
3 Units, Fall 2012

Please review the syllabus REGULARLY to maintain awareness of course expectations

INSTRUCTOR: Carlton H. Oler, Ph.D., Licensed Psychologist

OFFICE: SS 107. Office hours: Monday & Wednesday (9:30 a.m. to 10:30 a.m.), Tuesday (1:00 p.m. to 2:15 p.m.), & Thursday (1:00 p.m. to 2:15 p.m. & 4:00 p.m. to 4:30 p.m.)

PHONE/EMAIL: (408) 852-2808/coler@gavilan.edu. My webpage can be found on the Gavilan College website under “Class Homepages.”

CLASS TIME: Tuesday and Thursday, 11:20 a.m. to 12:40 p.m.

CLASSROOM: SS 210


COURSE DESCRIPTION: Continuation of Psychology 1A. This course stresses the biological basis of behavior including: neuroanatomy, the senses, perception, learning, thinking, and psychological disorders. Prerequisite: Completion of Psychology 1A with a grade of “C” or better. This course involves much reading and writing, so if you’re not willing to do both you should probably avoid this class.

ADA ACCOMMODATION STATEMENT: Students requiring special services or arrangements because of hearing, visual, or other disability should contact the Disabled Student Services Office, their counselor, or their instructor.

OCCUPATIONAL/VOCATIONAL STATEMENT: Occupational/Vocational students – Limited English language skills will not be a barrier to admittance to and participation in Vocational Education Programs.

STUDENT HONESTY POLICY REFERENCE STATEMENT: Students are expected to exercise academic honesty and integrity. Violations such as cheating and plagiarism will result in disciplinary action which may include recommendation for dismissal.

TEACHING STRATEGIES: Lectures, audio-visual aids, small group work, discussions, critical thinking questions, end of chapter quizzes, examinations, research paper, and demonstrations. Additional strategies may be utilized to help students’ better grasp the subject matter.

COURSE LEARNING OUTCOMES

1. To differentiate between neural and behavioral processes pertinent to biological psychology.
2. To identify major historical research and subsequent findings.
3. To analyze current research methodologies utilized in the study of mind-brain and brain-behavior relationships.
4. To differentiate components of the central and peripheral nervous systems, and endocrine system.
5. To identify and compare chemical communication processes.
6. To analyze the processing issues involved in the sensory modalities and the relationship between sensation and perception.
7. To compare and contrast neural processes involved in emotional expression, mental experience, learning, and behavior.
8. To examine the neural processes involved in the actions of drugs and teratogens.
9. To categorize the chemical, anatomical, and physiological components of the different stages/phases of human consciousness.
10. To examine the neural and chemical basis of various psychopathologies.
11. To identify and analyze credible scientific resources.

MAJOR CONTENT TOPICS

1. The Major Issues
2. Nerve Cells and Nerve Impulses
3. Synapses
4. Anatomy of the Nervous System
5. Development and Plasticity of the Brain
6. Vision
7. The Other Sensory Systems
8. Movement
9. Wakefulness and Sleep
10. Internal Regulation
11. Reproductive Behaviors
12. Emotional Behaviors
13. The Biology of Learning and Memory
14. Cognitive Functions
15. Mood Disorders and Schizophrenia

COURSE REQUIREMENTS

Attendance: Be on time for class. Students are allowed two absences according to Gavilan College policy. If class is missed a third time, the student will be dropped from the course (save your two absences for when you really need them). Avoid being absent or tardy on an exam day or when an assignment is due. If you come to class after roll call, be sure to see me at the end of class so I can mark you as present (letting me know at a later time will be too late). Students’ with perfect attendance (never absent, tardy, leave early, or exit class during class time from the first day of class) will receive a half grade boost to their final grade. Keep track of your attendance.

Classroom Etiquette/Participation: All electronic devices (e.g., cell phone, laptop, iPad, iPod) must be turned off (no texting, tweeting, checking/sending e-mail, surfing the Internet, listening to music, playing computer games) and put away (out of sight) during class time unless being used for typing lecture notes. When not typing lecture notes, the laptop screen, iPad, etc. must be face down. The first breach of any of these requirements will result in a warning. The second breach will result in the electronic device no longer being allowed in the classroom. No recording of the lectures is permitted unless deemed necessary by the Disability Resource Center. When your name is called during roll call, raise your hand high and shout “here” so I can be sure to mark you present. Please respect others’ beliefs, feelings, etc. in class—just as you would like others to do for you. Avoid self-disclosing or asking how to handle personal problems in class or in my office (counseling is available at the Gavilan College Counseling Department or your local mental health center). No eating or drinking (except water) is permitted in class. Refrain from using class time to copy notes from a missed class. Children can’t be allowed in the classroom (make sure to see me before inviting visitors). Sit close to the front of the class, and come prepared to participate in order to maximize learning (speak clearly and loud enough to be understood). Students with regular quality class participation (don’t overdo it) will have five bonus points added to their lowest exam score.

Critical Thinking Questions (CTQs): Students must type an answer to one or more CTQs for each of the 15 chapters. The answers should be single-spaced and typed in Times New Roman 12-font. The
CTQs will be posted online at least a week before they’re due. Each CTQ answer should be typed on a separate sheet of paper. If you turn in more than one CTQ answer at a time, staple them all together. Steps to typing strong CTQ answers: (1) read the CTQs carefully, (2) read the chapter carefully that the CTQs come from, (3) take time to think about and formulate your CTQ answers, (4) type your answers up according to the instructions on the CTQs website, (5) type only what directly and specifically answers the CTQ, and (6) don’t wait until the last minute to do the CTQs—have them printed out, stapled if two or more pages are handed in, and ready to turn in no later than the night before they’re due. Be sure to check/review your CTQs answers before you turn them in to make certain that you’ve followed the instructions. Lack of a textbook isn’t a legitimate excuse for not turning in assignments on time. An excellent CTQ example answer is on my website. CTQ answers must be turned in before roll call is completed and stapled if necessary to be accepted.

Research Paper: Students are required to type a 10 (full) to 12 page research paper on a topic in biological psychology (see Instructions for the 10 to 12 Page Research Paper below).

METHODS OF EVALUATION—keep track of your points/grades

Examinations: Exam 1 will cover chapters 1 to 6, Exam 2, chapters 7 to 10, and the final exam (Tuesday, December 11 at 10:30 a.m.), chapters 9, 10, 12, 13 and 14, and pulling it all together. Exams 1 and 2 will start at 11:20 a.m. If late for any of the three exams, the exam can’t be taken. All three exams will include a combination of short answer, essay, multiple choice and true and false items from the lecture notes, CTQs, textbook, small group work, and discussions. I VERY STRONGLY encourage you to start studying for the exams the day you first receive notes for a particular exam, so that cramming and stressing out can be avoided, and learning and grade satisfaction are maximized. Bring a large (11” x 8.5”) green book on each exam day and write your answers clearly in ink. NO make-up exams or extra credit assignments are available.

Grading System:
Exam 1 (100 pts.) -----------------------------------------------16%
Exam 2 (100 pts.) -----------------------------------------------16%
Final Exam (100 pts.) -------------------------------------------20%
Critical Thinking Questions (100 pts./7 pts. each CTQ) -----------------------------------------------18%
Research Paper (100 pts.) ---------------------------------------30%
500 pts. total 100%

Exams/CTQs/Research Paper:  Total:
A = 90%-100% (90 pts. up)  A = 90%-100% (450 pts. up)
A- = 89% (89-89.9 pts.)  A- = 89% (445-449.9 pts.)
B+ = 87%-88% (87-88.9 pts.)  B+ = 87%-88% (435-444.9 pts.)
B = 80%-86% (80-86.9 pts.)  B = 80%-86% (400-434.9 pts.)
B- = 79% (79-79.9 pts.)  B- = 79% (395-399.9 pts.)
C+ = 77%-78% (77-78.9 pts.)  C+ = 77%-78% (385-394.9 pts.)
C = 70%-76% (70-76.9 pts.)  C = 70%-76% (350-384.9 pts.)
D = 60%-69% (60-69.9 pts.)  D = 60%-69% (300-349.9 pts.)
F = 59% and down (59.9 pts. and below)  F = 59% and down (299.9 pts. and below)

COURSE SCHEDULE

Week 1, Overview of the Class
8/30 (Tu)  Review of the Syllabus
**Week 2, Overview of the Class**
9/4  (Tu)  Review of the Syllabus

9/6  (Th)  Strategies for Academic Success

**Week 3, Library Orientation/Conducting Research; The Major Issues**
9/11  (Tu)  Library Orientation/Conducting Research (library staff)

9/13  (Th)  **Chapter 1 CTQ answer due:** what biological psychology is, the biological explanations of behavior, biological psychology research, careers in biological psychology

**Week 4, The Major Issues (continued); Nerve Cells and Nerve Impulses**
9/18  (Tu)  The genetics of behavior—mendelian, heredity and environment, the Human Genome Project, evolution of behavior

9/20  (Th)  **Chapters 2 and 3 CTQ answers due:** cells of the nervous system—types, structure and function, processes involved in nerve cell transmission

**Week 5, Synapses; Anatomy of the Nervous System**
9/25  (Tu)  **Title card due:** what a synapse is, neurotransmitters, neurotransmission, what substance abuse and addiction is, hormones, parts of the brain involved in abuse and addictions, psychoactive drugs

9/27  (Th)  **Chapter 4 CTQ answer due:** anatomy of the nervous system—the central and peripheral nervous systems, parts of the brain and their functions, brain damage

**Week 6, Development and Plasticity of the Brain; Vision**
10/2  (Tu)  **Chapters 5 and 6 CTQ answers due:** development and plasticity of the brain—biochemical and environmental influences, impact of alcohol and other drugs and other factors on prenatal development and postnatal behavior

10/4  (Th)  Development of the vision system, sensing and perceiving, damage to the vision system

**Week 7, The Other Sensory Systems**
10/9  (Tu)  **Exam 1 (Chapters 1, 2, 3, 4, 5, 6); Chapter 7 CTQ answer due:** sensation, perception, audition, mechanical senses—vestibular sensation, somatosensation, pain

10/11 (Th)  Chemical senses—taste and olfaction

**Week 8, Movement; Wakefulness and Sleep**
10/16 (Tu)  **Chapters 8 and 9 CTQ answers due:** muscles and their functions, the neuro-physiological processes involved in movement, parts of the brain involved in movement, disorders of the spinal column and movement

10/18 (Th)  What sleep is, functions of sleep, stages of sleep

**Week 9, Wakefulness and Sleep (continued); Internal Regulation**
10/23 (Tu)  **Chapter 10 CTQ answer due:** sleep disorders, dreams and functions of dreams

10/25 (Th)  Homeostasis, thirst—osmotic and hypovolemic, hunger—food selection preferences, involvement of the hypothalamus in hunger
Week 10, Internal Regulation (continued)
10/30 (Tu) Research paper due; eating disorders (anorexia)—and its causes and treatments

11/1 (Th) Eating disorders (obesity and bulimia nervosa)—and their causes and treatments

Week 11, Reproductive Behaviors
11/6 (Tu) Exam 2 (Chapters 7, 8, 9, 10); Chapter 11 CTQ answer due; sex hormones—types and their effects on humans, sexual behavior—mating, gender identity and sexual orientation

11/8 (Th) Sexual disorders

Week 12, Emotional Behaviors
11/13 (Tu) Chapter 12 CTQ answer due; what emotion is, theories of emotion, parts of the brain involved in emotion, functions of emotions

11/15 (Th) What stress is, stressors, signs of stress, effect of stress on HPA

Week 13, Emotional Behaviors (continued); The Biology of Learning and Memory
11/20 (Tu) Chapter 13 CTQ answer due; factors that influence ability to handle stressors, stress management strategies, what learning is, types of learning, parts of the brain involved in learning

11/22 (Th) Thanksgiving Holiday

Week 14, The Biology of Learning and Memory (continued); Cognitive Functions; Mood Disorders and Schizophrenia
11/27 (Tu) Chapter 14 CTQ answer; what memory is, types of memory, parts of the brain involved in memory, amnesia, potentiation, functions of the right and left hemispheres, language development, language damage

11/29 (Th) Chapter 15 CTQ answer due; mood disorders—and their causes and treatments

Week 15, Mood Disorders and Schizophrenia (continued)
12/4 (Tu) Mood disorders—and their causes and treatments, schizophrenia—and its causes and treatments

12/6 (Th) Anxiety and personality disorders—and their causes and treatments

Week 16, Final Exams Week
12/11 (Tu) Final Exam—10:30 a.m. to 12:30 p.m. (Chapters 11 to 15 and pulling it all together)

Note: students are held responsible for any announcements or changes made during class time whether present, late, or absent
INSTRUCTIONS FOR THE 10 TO 12 PAGE RESEARCH PAPER
PSYC 1B Biological Psychology
Fall 2012

Your research paper should cover a topic in biological psychology of interest to you. The ideas for your research paper must come from the textbook. Your research paper title must be cleared by me face-to-face before you start working on your paper through bringing a list of five research titles to me (with your name on it) written down according to the phrasing of the Example PSYC 1B Research Paper Titles on my website (don’t choose your title from this list—they’re just examples). Bring your textbook with you to show me where in it you got the ideas for your five research titles. After I approve your research title, you can turn in a research title card. The research title card (3” x 5”) should contain the information listed on the “Research Title Card Example” below. The card must be turned in correctly filled out by Tuesday, September 25 before roll call is completed. If the card isn’t turned in by this date and/or done correctly, you will not earn any points on it and five points will be deducted from your research paper. Once your approved title card is turned in, you have one week to determine if there are enough empirical research articles (all contain a Method and Results section) available to write a research paper on it. If there aren’t enough empirical research articles on your title, you’ll have to come up with another title and approve it with me by the end of that week. Make a copy of the final title card approved (worth up to 5 pts) for yourself. Your research paper title drives your paper—ONLY WRITE ABOUT WHAT YOUR TITLE SAYS.

The research paper should be 10 (full) to 12 double-spaced pages long; not including the cover sheet or references page(s). Make sure to number your pages in the upper right-hand corner (the first page number begins on the page where you start writing about Why I Chose to Write on My Topic, and the last page number ends on the last page of your references list). You must have a minimum of seven (7) differently named references (journals), all of the articles in them must be empirical research articles, and at least two thirds of the references (journals) must be dated 2000 or later. Only material where an author and its origin can be cited can be used in the research paper. PLEASE, PLEASE, PLEASE READ the PSYC 1B Research Papers and References List Examples on my website MULTIPLE TIMES to be clear on what your research paper should look like. Make sure to consult the American Psychological Association (APA) Formatting and Style Guide and APA Citation Examples links on my website for additional details regarding how your research paper should be written. Also, I encourage you to use the Writing Center for help in writing your research paper. The research paper must be original research; not a rewritten paper from this class or another class, or from someone who wrote the paper for you, and must be printed out in Times New Roman 12-font. Two copies of the research paper and a copy of only those pages from the articles used to write your paper (stapled in alphabetical order with the information from the articles used in the paper highlighted in yellow) must be turned in by Tuesday, October 30 before roll call is completed—absolutely no excuses. Make sure to write the citations for the articles you use on the first page at the very top of the articles you turn in (if this information isn’t already provided). All material must be placed in a 10” x 13” manila envelope with your name on it. Five points will be added to papers turned in at least a week early by 11:20 a.m.—I VERY STRONGLY encourage you to schedule the research paper due at least a week early to earn the bonus five points. You can gather articles for your research paper from Ebscohost or other data bases through the Gavilan College library. Contact the staff at the library NOW for access to Ebscohost and other data bases, and for help in researching your topic. Students are required to complete LIB 736 Develop a Research Topic. You have three weeks once the online class is opened to successfully complete all six modules—failure to do so will result in five points being deducted from your research paper. Also, there’s an excellent online tutorial on Researching Empirical Studies (articles) for PSYC 1B on the Gavilan College Library website.
There are five sections in the research paper: (1) Why I chose to Write on My Topic (worth up to 5 pts.), (2) What the Research Says About My Topic (worth up to 50 pts.) should describe the topic you’re writing on, and present the information, theories, findings, citations, etc. related to your topic and make up the majority of the pages in your paper (don’t put any personal or treatment statements in this section)—PUT ONLY WHAT THE RESEARCH SAYS IN THIS SECTION, (3) What I Learned Personally, Interpersonally and Professionally (worth up to 10 pts.), (4) How I plan to Apply What I Learned Personally, Interpersonally and Professionally (worth up to 10 pts.), and lastly, the (5) References page(s) (worth up to 20 pts.). The first, third and fourth sections of your research paper should take up no more than three pages combined. The cover sheet of your research paper should have your research paper title, your name, my title and last name, the class title and meeting days and times, Gavilan College, and the date the paper was handed in all centered (see cover sheet example below). PLEASE, PLEASE, PLEASE take time to CHECK/REVIEW YOUR RESEARCH PAPER against the Outline for the 10 to 12 Page Research Paper and Checklist for the 10 to 12 Page Research Paper below before you turn it in to make certain that you’ve followed ALL of the instructions so that learning is maximized and valuable points aren’t lost.

RESEARCH TITLE CARD EXAMPLE (3” x 5”)
(Handwritten on lined-side of the index card)

Your name
Title of your research paper
PSYC 1B, Tu, Th 11:20-12:40 p.m.

I plan to write about.... (complete the paragraph)

DON’T PROCRASTINATE, START WORKING ON YOUR RESEARCH PAPER NOW!
OUTLINE FOR THE 10 TO 12 PAGE RESEARCH PAPER  
(Remember to indent each paragraph)

**Why I Chose to Write on My Topic**

I chose to write on my topic... (complete one or more paragraphs)

**What the Research Says About My Topic**

Describe your topic (complete one or more paragraphs)

The information, theories, findings, citations, etc. on your topic (complete numerous paragraphs because this is the most important section of the research paper)—no personal or treatment statements can go in this section

**What I Learned Personally, Interpersonally and Professionally**

I learned personally\(^{1a}\)… (complete the paragraph)

I learned interpersonally\(^{2a}\)… (complete the paragraph)

I learned professionally\(^{3a}\)… (complete the paragraph)

**How I Plan to Apply What I Learned Personally, Interpersonally and Professionally**

I plan to apply what I learned personally\(^{1b}\)… (complete the paragraph)

I plan to apply what I learned interpersonally\(^{2b}\)… (complete the paragraph)

I plan to apply what I learned professionally\(^{3b}\)… (complete the paragraph)

**References**

(Starts on a new, separate page)

List 7 or more references

---

**Personally** means \(^{1a}\) write about what you learned about yourself from what the research said about your topic, and \(^{1b}\) how you plan to apply what you learned about yourself to yourself—use words like I, me, my or myself to indicate that you’re writing about personally; **interpersonally** means \(^{2a}\) write about what you learned about others (e.g., mother, father, sister, brother, spouse, significant other, friends, boyfriend, girlfriend, roommate) from what the research said about your topic, and \(^{2b}\) how you plan to apply what you learned to these people—use words like mother, father, sister, brother, spouse, significant other, friends, boyfriend, girlfriend or roommate to indicate that you’re writing about interpersonally; and **professionally** means \(^{3a}\) write about what you learned about your past, present or future job (e.g., supervisor/boss, coworkers, place of employment, customers, supplier) from what the research said about your topic, and \(^{3b}\) how you plan to apply what you learned to your past, present or future job—use words like my supervisor/boss, coworkers, customers, supplier, my job, my work, my employer or my career, self-employment to indicate that you’re writing about professionally.
Neurobiological Contributors to Obsessive-Compulsive Disorder

Carlos Barerra

Professor Oler

PSYC 1B Biological Psychology, Tu, Th 11:20-12:40 p.m.

Gavilan College

October 30, 2012
CHECKLIST FOR THE 10 TO 12 PAGE RESEARCH PAPER

MUST be stapled to the front of a copy of your research paper—five points will be deducted if not attached and filled out. Put a check next to the statements that are TRUE for your paper.

1. ____ My research paper (from a biological psychology perspective) is original research; not a rewritten paper from this class, another class, another student, any other person, through the Internet, or anything else.

2. ____ My research paper is 10 (full) to 12 typed double-spaced pages long; not including the cover sheet or references page(s), and is printed out in Times New Roman 12-font. It includes a cover sheet with my research paper title, my title and last name, the class title and meeting days and times, Gavilan College and the date the research paper was turned in all centered. The first page number begins on the page where I write about why I chose to write on my topic, and the last page number on the last page of the references list. No more than 3 pages have been used to cover the first, third and fourth sections of my research paper. My research paper is stapled together in the upper left hand corner.

3. ____ I have at least seven (7) differently named references (journals), all of the articles I used are empirical, and at least two thirds are dated 2000 or later.

4. ____ The overall style of my research paper is in harmony with the American Psychological Association Formatting and Style Guide and the sample research papers on my website.

5. ____ The first section of my research paper describes Why I Chose to Write on My Topic.

6. ____ The second section of my research paper, What the Research Says About My Topic, describes my topic, and presents the information, theories, findings, citations, etc. on my topic based on what the research says (I put no personal or treatment statements in this section).

7. ____ The third section of my research paper addresses What I Learned Personally, Interpersonally and Professionally.

8. ____ The fourth section of my research paper addresses How I Plan to Apply What I Learned Personally, Interpersonally and Professionally.

9. ____ The fifth section of my research paper (starts on a new page) is the References page(s).

10. ____ I have highlighted in yellow all the information in the articles that I used in my paper. I have also made sure that the first page of all the articles I used in my paper is attached. If this first page doesn’t contain the author(s) name, title of article, year the article was published, name of the reference the article is published in, and the pages in the reference where the article can be found, I have written this information clearly at the very top of each first page.

11. ____ I have enclosed everything in a 10” x 13” manila envelope with my name written on it—the order of material in my envelope is two copies of my research paper first, and only the pages of the articles I used in my paper second (stapled in separate sets in alphabetical order).

12. ____ I have turned in my research paper to Dr. Oler in class by 11:20 a.m. on Tuesday, October 30 before roll call was completed: ___________________________ signature and phone number.