INSTRUCTOR: Carlton H. Oler, Ph.D., MAC, BCPCC, Licensed Psychologist (PSY 20356)

OFFICE/PHONE/EMAIL: SS 107. Office hours: Monday & Wednesday (9:30 a.m. to 10:30 a.m.) and Tuesday & Thursday (1:00 p.m. to 2:30 p.m.); (408) 852-2808; coler@gavilan.edu. My webpage can be found on the Gavilan College website under “Class Homepages.”

CLASS TIME/CLASSROOM: Tuesday and Thursday, 11:20 a.m. to 12:40 p.m., SS 214.


COURSE DESCRIPTION: This course stresses the biological basis of behavior including: neuroanatomy, the senses, perception, learning, thinking, and psychological disorders. Prerequisite: Completion of PSYC 10 with a “C” grade or better. This course is challenging, so be ready to work.

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 define and use the basic biological, physiological, and psychological terminology of biological psychology and the neurosciences.
2. To identify, analyze, and explain the research methodologies that characterize the biological psychology approach and the neurosciences.
3. To identify and describe examples of invasive vs. noninvasive research methods, and research ethics and safeguards for the study of animals and humans.
4. To differentiate between neural and behavioral processes relative to biological psychology.
5. To differentiate among specialty areas within biological psychology and the related disciplines within the neurosciences.
6. To describe neural conduction and synaptic transmission.
7. To summarize the major issues in human evolution, genetics, and behavioral development that underlie the biology of behavior.
8. To explain the role of the central and peripheral nervous systems, and the neuroendocrine system as they relate to behavior and various psychopathologies.
9. To give examples of various brain-behavior relationships such as motivation, sexual behavior, sleep, learning, memory, stress, drug dependence, mood disorders, and schizophrenia.

**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. Depressive Disorders and Schizophrenia

**COURSE REQUIREMENTS**

**Attendance/Assignment Completion:** Be on time for class and stay the full time. If a student misses three classes or assignments (e.g., CTQs, title card, research paper, LIB 736), she or he will be withdrawn from the course (seriousness about a course is shown by regular attendance and completion of assignments). 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. Students’ with **perfect attendance** (never absent, tardy, leave early, or exit class during class from the first day of class) will receive a half grade boost to their final grade. Keep track of your attendance.

**Classroom Etiquette/Participation:** Please turn off and put away all electronic devices during class unless being used for a legitimate class purpose (e.g., taking notes). The first breach of this requirement will result in a warning, and the second will result in the device not being allowed in the classroom and the student being dismissed from class for the rest of the day. 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 as present. 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 (Gavilan College and the California Community College Chancellor’s Office provide resources for you to succeed overall during your college experience). Go to [http://ccc.kognito.com](http://ccc.kognito.com) for an online training to learn about these opportunities, or to Gavilan’s Counseling website at [www.gavilan.edu/counseling](http://www.gavilan.edu/counseling/) or Student Health at [www.gavilan.edu/health](http://www.gavilan.edu/health). No eating or drinking (except water) is permitted in class. Be 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** (try not to 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, (6) don’t wait until the last minute to do the CTQs—have them printed out, and ready to turn in no later than the night before they’re due, and (7) check your CTQ 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 assignments in on time. A 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 (Thursday, December 11 from 10:30 a.m. to 12:30 p.m.): chapters 11 to 15 and pulling it all together (not a comprehensive exam). 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. 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 to each exam. Sorry, no make-up exams 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:
A = 90%-100% (90 pts. up)
A- = 89% (89-89.9 pts.)
B+ = 87%-88% (87-88.9 pts.)
B = 80%-86% (80-86.9 pts.)
B- = 79% (79-79.9 pts.)
C+ = 77%-78% (77-78.9 pts.)
C = 70%-76% (70-76.9 pts.)
D = 60%-69% (60-69.9 pts.)
F = 59% and down (59.9 pts. and below)

Total:
A = 90%-100% (450 pts. up)
A- = 89% (445-449.9 pts.)
B+ = 87%-88% (435-444.9 pts.)
B = 80%-86% (400-434.9 pts.)
B- = 79% (395-399.9 pts.)
C+ = 77%-78% (385-394.9 pts.)
C = 70%-76% (350-384.9 pts.)
D = 60%-69% (300-349.9 pts.)
F = 59% and down (299.9 pts. and below)

COURSE SCHEDULE

Week 1, Overview of the Class
8/26 (Tu) Review of the Syllabus
8/28 (Th) Review if the syllabus
Week 2, Overview of the Class
9/2  (Tu) Strategies for Academic Success
9/4  (Th) Strategies for Academic Success

Week 3, Library Orientation/Conducting Research; Writing Center; The Major Issues
9/9  (Tu) Library Orientation/Conducting Research; Writing Center

9/11 (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
9/16 (Tu) The genetics of behavior—mendelian, heredity and environment, the Human Genome Project, evolution of behavior

9/18 (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
9/23 (Tu) Title Card due; what a synapse is, neurotransmitters, neurotransmission, hormones, parts of the brain involved in substance use disorders, psychoactive drugs, what substance use disorder is

9/25 (Th) Chapter 4 CTQ answer due; anatomy of the nervous system—the central and peripheral nervous systems, parts of the brain and their functions, research methods in biological psychology

Week 6, Development and Plasticity of the Brain; Vision
9/30 (Tu) Chapters 5 and 6 CTQ answers due; development and plasticity of the brain—biochemical and environmental influences, impact of substance use and other factors on prenatal development and postnatal behavior, brain damage effects

10/2 (Th) Development of the vision system, sensing and perceiving, damage to the vision system

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

10/9 (Th) Extra Credit Book Assignment due; Chemical senses—taste and olfaction

Week 8, Movement; Wakefulness and Sleep
10/14 (Tu) Chapters 8 and 9 CTQ answers due; muscles and their functions, the neurophysiological processes involved in movement, parts of the brain involved in movement, disorders of the spinal column and movement

10/16 (Th) What sleep is, functions of sleep, stages of sleep
**Week 9, Wakefulness and Sleep (continued); Internal Regulation**
10/21 (Tu) **Chapter 10 CTQ answer due;** sleep-wake disorders, dreams and functions of dreams

10/23 (Th) Homeostasis, thirst—osmotic and hypovolemic, hunger—food selection preferences, involvement of the hypothalamus in hunger

**Week 10, Internal Regulation (continued)**
10/28 (Tu) **Research Paper due;** eating disorders (anorexia)—and its causes and treatments

10/30 (Th) Eating disorders (obesity and bulimia nervosa)—and their causes and treatments

**Week 11, Reproductive Behaviors**
11/4 (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

11/6 (Th) Sexual dysfunctions/paraphilias

**Week 12, Emotional Behaviors**
11/11 (Tu) **No Class (Veterans Day)**

11/13 (Th) **Chapter 12 CTQ answer due;** what emotion is, theories of emotion, parts of the brain involved in emotion, functions of emotions, what stress is, stresssoars, signs of stress, effect of stress on HPA

**Week 13, Emotional Behaviors (continued); The Biology of Learning and Memory**
11/18 (Tu) **Chapter 13 CTQ answer due;** factors that influence ability to handle stresssoars, stress management strategies

11/20 (Th) What learning is, types of learning, parts of the brain involved in learning

**Week 14, The Biology of Learning and Memory (continued); Cognitive Functions**
11/25 (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

11/27 (Th) **No Class (Thanksgiving)**

**Week 15, Depressive Disorders and Schizophrenia**
12/3 (Tu) **Chapter 15 CTQ answer;** depressive disorders—and their causes and treatments, schizophrenia spectrum disorders—and their causes and treatments

12/5 (Th) Anxiety disorders—and their causes and treatments, personality disorders—and their causes and treatments

**Week 16, Final Exams Week**
12/11 (Th) **Final Exam—10:30 a.m. to 12:30 p.m. (Chapters 11 to 15 and pulling it all together—not a comprehensive exam)**
INSTRUCTIONS FOR THE 10 TO 12 PAGE RESEARCH PAPER
PSYC 11 Biological Psychology
Fall 2014

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 through bringing a list to me with your name on it of five research titles (ranked from your first to fifth choice) written down according to the phrasing of the Example PSYC 11 Research Paper Titles on my website (don’t choose your titles 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 title card must be turned in correctly filled out by Tuesday, September 23 before roll call is completed. If the title card isn’t turned in by this date, you can’t write a research paper, and therefore won’t receive any points for this assignment. If your card is turned in incorrectly done, you won’t earn any points on it. 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 (don’t base your paper on abstracts; download the full article that you plan to use in your paper). If there aren’t enough empirical research articles on your title, you’ll have to come up with five more titles and have me approve one of them by the end of that week. Be sure to 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 articles where an author and its origin can be cited can be used in the research paper. PLEASE READ the PSYC 11 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. 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. 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. Incompletion of LIB 736 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 10/11 on the Gavilan College Library website under Find Your Class, Class Web sites.

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).

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 in separate sets with the information from the articles used in the paper highlighted in yellow) must be turned in by Tuesday, October 28 before roll call is completed—no excuses please. 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), and that I can tell that each article has a Method and Results section. 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 beg you to schedule the research paper due at least a week early to earn the bonus five points. Please take time to check 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, and the Example PSYC 11 Research Papers on my website 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 11, Tu, Th 11:20-12:40 p.m.

I plan to write about.... (complete a brief paragraph)

**DON’T PROCRASTINATE ON THE RESEARCH PAPER, START WORKING ON IT 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... (one or two paragraphs are enough)

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)—don’t put any personal or treatment statements in this section

What I Learned Personally, Interpersonally and Professionally
I learned personally1a… (complete the paragraph)
I learned interpersonally2a… (complete the paragraph)
I learned professionally3a… (complete the paragraph)

How I Plan to Apply What I Learned Personally, Interpersonally and Professionally
I plan to apply what I learned personally1b… (complete the paragraph)
I plan to apply what I learned interpersonally2b… (complete the paragraph)
I plan to apply what I learned professionally3b… (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 11 Biological Psychology, Tu, Th 11:20-12:40 p.m.

Gavilan College

October 28, 2014
CHECKLIST FOR THE 10 TO 12 PAGE RESEARCH PAPER

Staple this sheet to the front of one of the copies of your research paper—five points will be added if 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 re-written 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 turned in my research paper to Dr. Oler in class on Tuesday, October 28 before roll call was completed: ____________________________ signature and phone number.