

Laboratory in Behavioral Neuroscience
Fall 2008
Psychology/Biology 3142-002

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Office Hours:	Wednesday, 1:30-2:30pm	Tuesday, 1:30-2:30pm
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Course Description: Research methodologies employed in the study of the biological bases of behavior. 1 hour credit, granted only once.

Course Learning Goals and Objectives: Upon completion of the course, students will understand and be able to describe the underlying principles of behavioral neuroscience, methods used by neuroscientists to further assess said principles, and the application of neuroscience experiments to everyday life. Additionally, students will be able to assess and critically evaluate experimental designs and methodologies in published research as well as demonstrate knowledge of important areas of the brain through a comprehensive topic paper and presentation.

Requirements: The prerequisite for this course is PSYC 3322, either completed or currently enrolled. In addition, psychology students must have completed Psych 2443 and 2444. Biology students are encouraged (but not required) to have completed coursework in statistics and experimental design prior to taking this lab.

PSYC 3142 Prerequisite: PSYC 2442 or PSYC 2444

BIOL 3142 Prerequisite: Department consent.

Required Readings: The necessary materials will be placed on WebCT. No textbook is required, but Kalat's (2007) *Biological Psychology* may be a helpful resource.

Attendance Policy: Attendance is required, and it is highly recommended that you attend all class meetings. Portions of the exam will come directly from class lecture material, as well as knowledge about the classroom demonstrations. Attendance will be randomly assessed during 10 labs at the beginning of class.

Drop Policy: A course drop grade will be assigned according to UTA policy (see current catalog). No grade is given if a student drops the course before 5:00 pm CST on the Census Date, September 10th, 2008. A student may drop a class with a grade of 'W' until two-thirds of the semester has passed, which occurs on October 31st, 2008. Students may only drop a course after this point with approval from the appropriate official.

Specific Course Requirements

Quizzes: Five quizzes will be given throughout the semester over material presented in the lab and assigned readings. The lowest quiz grade will be dropped to calculate final grades. **NO makeup quizzes will be given!** A missed quiz will count as a zero and your lowest dropped grade. Those arriving after 5:30 pm will not be allowed to take the quiz after the first quiz has been turned in!

Assignments: Required writing assignments will be due throughout the semester. These are to be done **individually**, and following the University of Texas at Arlington's guidelines on plagiarism. These are due, double spaced and in hard copy format, at the beginning of the class period.

A group presentation (25-30 minutes) on an assigned major brain area will also be included as part of the grade for the research paper on the same brain area. Any assignments received after 9:00 pm on class days will be considered late, with 10% taken off the earned grade. For each additional 24-hour period that passes, another 10% will be taken off this grade. No late assignments will be taken after 1 week, and emailed assignments will not be accepted. Any absences without University of Texas at Arlington-approved documentation will count against the number of days late. If you are absent and can provide the appropriate documentation, no late points will be deducted. However, you **MUST** turn in the assignment upon your return to campus (NOT the following week/class period).

Academic Dishonesty: As stated in the catalog and below: it is the philosophy of the University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. Therefore, students who are caught engaging in such acts will receive a zero for the assignment/quiz and be referred to judicial affairs.

This includes copy-pasting from original sources, failing to cite sources appropriately, and/or failing to cite the page numbers of quotations. It is better to be safe and cite too much than to be sorry if you fail to document your sources!

Grading Policies and Procedures:

<u>Assignment</u>	<u>Points</u>
Four of Five Quizzes	50 points each (200 total)
Plagiarism Quiz	10 points
Article Summaries/Critiques	40 points each (120 total)
Group Presentation	10 points
Individual Topic Paper	50 points
Attendance	10 points
Total	400 points

<u>Letter Grade</u>	<u>Total Points Required</u>
A	358-400
B	318-357
C	278-317
D	238-277
F	below 238

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 - The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at www.uta.edu/disability. Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272-3364.

Student Support Services Available: The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referral.

E-Culture Policy: The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning registration, financial aid, payment of bills, and graduation may be sent to students through email.

All students are assigned an email account and information about activating and using it is available at www.uta.edu/email. New students (first semester at UTA) are able to activate their email account 24 hours after registering for courses. There is no additional charge to students for using this account, and it remains active as long as a student is enrolled at UT-Arlington. Students are responsible for checking their email regularly.

Grade Grievance Policy: The University Grade Grievance Policy will be followed. (See Grade Grievance Policy in the Undergraduate Catalog.)

Tentative Course Schedule

<u>Week:</u>	<u>Date:</u>	<u>Topic:</u>
1	August 27th	Course Introduction Plagiarism/Literature Review Guidelines and Ethics of Animal Research Experimental Design Statistics Overview Group Assignments—Sign up sheets
2	September 3 rd	Plagiarism Quiz Due (10 points) Laboratory Training Module Brain Area Assignments Quiz #1 (50 points) Behavioral Methodology
3	September 10 th	Article Summary and Critique #1 Assigned The Action Potential Synaptic Transmission & Receptors Methodology: Electrophysiological Recording
4	September 17 th	Article Summary and Critique #1 Due (20 points) The Brain: Major Areas and Functions Neuroanatomy: Sheep Brain Dissection Disorders and Diseases of the Brain
5	September 24 th	Quiz #2 (50 points) Surgical Manipulations of the Brain Histological Procedures Stereotaxic Surgery Demonstration
6	October 1 st	Quiz #3 Self-Stimulation Demonstration
7	October 8 th	Article Summary and Critique #2 Due (20 points) Neuropharmacology & Addiction In-class demonstration (online) Brain Area of the Week: Cerebral Cortex

- 8 October 15th **Brain Area of the Week: Thalamus
Quiz #4**

- 9 October 22nd **In-class Experiment: Pharmacology & Behavior
Experiment Summary Assigned**

- 10 October 29th **Brain Area of the Week: Brainstem
Experiment Summary Due (20 points)
Brain Imaging Techniques**

- 11 November 5th **Brain Area of the Week: Hypothalamus & Pituitary Gland
Neuroendocrinology**

- 12 November 12th **Brain Area of the Week: Limbic System**

- 13 November 19th **Brain Area of the Week: Hippocampal Formation**

- 14 November 26th **Brain Area of the Week: Cerebral Ventricles & Choroid Plexus
Neuroscience Applications & Jobs**

- 15 December 3rd **Last Class Day!! Final Quiz #5**