

## **PSYC 220 BIOPSYCHOLOGY**

**TEXTBOOK:** Kalat, James, W. (2013). *Biological Psychology* (12th ed.) Belmont, CA: Thomson

**COURSE DESCRIPTION/OBJECTIVE:** This course will acquaint you with the biological mechanisms which underlie human behavior. This course is appropriate for students who are interested in surveying the topics of Biological Psychology. The pre-requisite for this course is Psyc 101/General Psychology.

### **SAKAI:**

- Frequently refer to Sakai for important class materials and announcements
- Go to <https://sakai.unc.edu>
- Login with onyen and onyen password
- choose our class
- If your Sakai login does not work, you will miss important emails and announcements, as well as be unable to complete your quizzes. Contact 962-HELP (ITS) to resolve any Sakai issues.

### **COURSE REQUIREMENTS:**

**NOTE: ABSENCES--for whatever reason (e.g. late registration, illness, university-sponsored event, ETC.)-- ARE ACCOMMODATED BY DROPPING AN EXAM OR ASSIGNMENT. PLEASE SEE BELOW FOR DETAILS.**

**UNDERSTAND THAT MOST OF YOUR COURSE GRADE IS BASED ON MASTERY (i.e. How well do you understand the concepts, as shown on an exam). As such, while we give credit for effort (in the form of quizzes & assignments), these account for a much smaller percentage of your course grade because in the end, what matters is how well you know the concepts.**

- **4 Exams given, 3 Exams counted (including cumulative final exam): 78% of course grade**
  - Exams are weighted equally.
  - Policy on missing an exam and/or being late to an exam.
    - It is strongly encouraged that you NOT miss any exams as exams are weighted very heavily in this course.
    - Should you need to miss an exam, whether due to a university-sanction event (e.g. athletic event), religious reasons, illness, or ANY other reasons, we will allow you to miss one exam, no questions asked. There are NO makeup exams in this course.
      - You never know what will happen at the end of a semester so do NOT miss an exam unless you absolutely must.

- If you miss a second exam, you will be given a zero for that exam. If you miss second exam due to health reasons, you will be advised to consider a medical withdrawal.
  - If you take all of Exams 1 - 3, at the end of the semester, we will drop your lowest exam score. The cumulative final exam is never dropped.
  - You are considered "absent" if you are late for an exam such that at least one person in class has already completed the exam.
  - It is university policy that an instructor cannot change the final exam time. An Official Examination excuse from Academic Advising (or from Student Health) is needed in order for you to take the final exam on our alternative date. Academic Advising only grants these excuses under very specific circumstances (i.e. having 2 finals at the exact same time or having three finals within a 24-hour period). The alternative final exam date for our class is: **Wednesday, May 4th, 9 am to Noon, DAVIE HALL 347**. Be sure to email the class email account to RSVP for this exam & bring your pink slip to the exam (the IA will be unable to give you an exam if you do not have your Official Examination Excuse in hand). If you miss the alternative date/time for the final exam because of something not within your control (e.g. illness with an Official Examination Excuse), email Dr. Loeb immediately to make an arrangement to make up the final exam within the first 8 weeks of the next semester.
  - If you miss the cumulative final exam, you will be given an "AB," which means that--IF you have an Official Examination Excuse--you will need to take the cumulative final exam on the alternative final exam time listed above and/or reschedule within the first 8 weeks of the next semester. Otherwise, the "AB" turns into a permanent "F." If you do not have an Official Examination Excuse, you will be given a zero for the cumulative final exam.
- **What you need to bring to exams:**
  - Bring #2 pencil & scantron (available at Student Stores)
    - Fill out your scantron information (i.e. name, PID; no sequence # needs to be filled out) before coming to class. A sequence # is not needed.
    - Be careful not to bend/rip the scantron (or you may not get a score back)
  - Do NOT bring cell phone or other electronic devices. If you have these items with you, you may not be allowed to complete your exam.
- **Learning disabilities:** If you have a learning disability and are eligible for extended exam time, please be sure to contact Accessibility Resources & Service) to arrange for them to proctor your exams (<http://www.unc.edu/depts/lds/students-overview.html>). **Please do this at least one week before an exam.**
  - Exams must be scheduled for the same day as when the class is scheduled to take the exam. When scheduling the exam, choose a time which is the same or closest to our usual class time. You cannot take the exam on a day different from when the rest of the class will be having their exam; if you

do, this will entail points deducted and/or a grade of zero, in order to be fair to all students.

- I will send them an electronic version of the exam directly to ARS. Indicate that you'd like for ARS to remind me to send a digital copy of the exam to their office.
- **It is VERY important for you to also email me a reminder to send your exam as ARS sometimes fails to do so.**
- **YOU WILL HAVE UNTIL THE NEXT EXAM TO REVIEW AN EXAM. Due to time constraints--as well as to improve study strategy--you will NOT be able to review all exams at the end of the semester. Therefore, be sure to review your exams on a timely basis!**
- **When reviewing an exam, it is VERY important to RSVP for office hours so that the IA has time to locate your exam before you arrive for the review. If you come unannounced, the IA may be unable to find your exam at that time.**
- **CLASS PARTICIPATION BONUS:** There will be opportunity to earn small (usually .3%) bonus credit towards an exam by participating in class, such as volunteering for a class demonstration or being called on to answer a question posed by Dr. Loeb during lecture. These bonus points will count towards the next exam. Limit: .3% per day.
- **IN-CLASS, timed Quizzes:** 8% of course grade
  - Quizzes are meant to give credit for effort, as well as to check your basic understanding of the readings. Therefore, quizzes are not as difficult as exams.
  - **11 Quizzes will be given during unannounced times in class**, but generally before starting a new topic. **8 of those quizzes will be counted** towards the overall course grade. You will be given ~8 minutes for each quiz.
    - You should be prepared to take the quiz before the start of the class on the dates listed below. This is true even if we are behind in class so pay particular attention to the quiz deadlines below.
    - You must score at least 50% or more on the quiz in order to receive "full credit," which is denoted as a "1." If you receive less than 50%, you will not receive any credit.
  - There are **NO makeup or late quizzes**, so if you are late coming to class, late taking the quiz, and/or miss class, you will be unable to receive quiz credit.
- **Papers:** 8% of course grade
  - Papers are another way in which we give credit for effort as well as to direct your attention to some very key concepts which will better prepare you for exams.
  - **Deadline: Completed** on Sakai **by 6:00 AM** on the date that it is listed below.
    - **NO EXTENSIONS** for any reason, including computer problems. Thus, it is **STRONGLY** recommended that you complete the papers at least 1-2 business days before the due date.
    - No emailed or hardcopy papers will be graded--only those uploaded to Sakai.
    - If you experience computer problems, contact ITS for assistance (919-962-HELP).
    - You can resubmit answers until the deadline.

- Be sure to submit to the **CORRECT ASSIGNMENT LINK**. It is your responsibility to check to make sure that your paper was uploaded to the correct link. IAs can only grade assignments which have been submitted to the correct link by deadline.
- **Complete 8** out of 11 assignments.
- Grading
  - If you receive a "1," this is full credit.
  - If you receive less than "1," be sure to view IA comments to see how future submissions can receive full credit. Do an extra assignment to make up for the lost credit.
  - 90% of answers correct (when applicable) + 100% effort = full credit
  - < 90% of answers correct (when applicable) and/or unsatisfactory effort/thought put into answering questions = .5 or less
- This is NOT group work. Do NOT **plagiarize** ("*to steal and pass off (the ideas or words of another) as one's own : use (another's production) without crediting the source,*" [www.merriam-webster.com](http://www.merriam-webster.com)). This is an Honor Offense ([http://honor.unc.edu/index.php?option=com\\_content&view=article&id=54&Itemid=55](http://honor.unc.edu/index.php?option=com_content&view=article&id=54&Itemid=55)).
- **How to submit:**
  - Assignments are posted in Sakai under "Assignments"
  - Submit via the textbox:
  - *Write your paper in Word*
    - *Copy the text in your paper*
      - *In Sakai, under "Submission/Assignment Text," click the icon which looks like a clipboard with a "W" on it.*
      - *When a separate textbox window appears, use Ctrl+V or Cmd + V (mac users) to paste your paper into the textbox*
      - *Clean up the textbox if necessary*
      - *Click "OK," then click the Honor Pledge (it won't submit otherwise), & click "Submit"*
      - *You will receive a confirmation if you submit successfully.*
    - Format of papers:
      - ANSWERS NEED TO BE IN PARAGRAPH FORM.  
Don't just answer the questions...incorporate the answers to questions in an integrated fashion. We are practicing writing skills.
      - single-spaced
      - approx. 1 page in length
        - If your paper is less than a page, it may be a sign that you have not been thorough and you may not receive full credit (it is not page length so much as comprehensiveness and details that we are looking for).
      - Times New Roman font 12
    - Content of papers:
      - **NO direct quotes**

- Paraphrase (we want to read what you think!)
  - Tips on how to paraphrase:
    - read section
    - create outline of main points
    - use outline (with textbook closed) to write paper
  - No outside research is expected for these papers; use textbook and lecture information
- Paper topics:
  - **Action potential paper:** Describe the steps involved in an action potential. Specifically, 1) what IS the action potential (i.e. definition), 2) what triggers this to occur, 3) what ion channels open & close (and when?), 4) what is the absolute refractory period, 5) what is the relative refractory period, 6) how does the membrane potential return to the resting value, 7) what does the Na<sup>+</sup>/K<sup>+</sup> pump do (hint: it is NOT what drives the membrane potential to return to resting value!), 8) where does the action potential occur?, and 9) how can an action potential move more quickly through a neuron?
  - **Pituitary paper:** Describe the anatomy of the pituitary. Give a couple examples of the hormones which are released by each part of the pituitary.
  - **Brain research methods paper:** Describe the following procedures: CT scan, MRI, fMRI, EEG, MEG, PET, ablation/lesion, stimulation. What information does this procedure give (e.g., image of brain? functional information about the brain)? How is this procedure done? Is it harmful (e.g., does it involve radiation? does it damage the brain?)
  - **Ferret paper:** Describe the ferret experiment. What was done to the ferrets and why? What were the results/conclusions?
  - **Vision paper:** There are at least three different types of cells in the primary visual cortex. Describe where the primary visual cortex is located. Describe how the three different types of cells differ from each other.
  - **Auditory paper:** Describe the theories of pitch.
  - **Sleep paper:** Your textbook lists a variety of sleep disorders. What symptoms differentiate each from the others?
  - **Osmotic thirst paper:** Describe osmotic thirst: what triggers osmotic thirst? which area of the brain detects when we have osmotic thirst? what happens then? how is osmotic thirst corrected? how do we know when to stop drinking?
  - **Sexual orientation:** What possible biological factors may be involved with sexual orientation? (remember that “sexual orientation” is different from a person’s sex)
  - **Memory paper:** What is the difference between “short-term” and “working” memory? (check lecture notes)
  - **Schizophrenia paper:** Describe the “neurodevelopmental hypothesis” of schizophrenia.
- **Attendance/in-class writing assignments: 6% of course grade**

- Attendance checks will be done in the form of PollEverywhere Questions during class. Credit will be given for participating, regardless of whether the answer given is correct or not.
- You must register properly in order to receive credit. Please go here to get instructions on registering for PollEverywhere:  
<https://www.polleverywhere.com/register?p=1jac-1a5v>. Be sure to ready to respond to a poll on the first day of class.
- Checks will be given every day that we meet in person.
- We will count 90% of responses to allow for absences, technical problems, ETC.
- If you have any technical issues with PollEverywhere, please contact ITS at 919-962-HELP.
- **DUE TO TIME CONSTRAINTS, ANY QUIZ or PAPER ISSUE MUST BE RESOLVED WITHIN 1 WEEK OF THE ASSIGNMENT--SO DO NOT WAIT UNTIL THE END OF THE SEMESTER.**

**STUDY TIPS:**

- Carolina can be challenging but everyone can do well--IF they 1) know how to study and 2) take time to study. The goal is not to study 24-7 but to study efficiently (i.e., study for the least amount of time for the most amount of information). Here are several tips on how to do this (**more are posted on Sakai**):
  - **Take excellent notes in class** (or combine notes with classmates). You could never take “too many” notes. Pay attention to what we talk about in class--this is one way to draw your attention to important concepts.
  - Expect to take some time to study. The rule of thumb is 2 hours of study outside of class for every hour spent in class per week. (So our 3 credit hour class = 6 hours of outside study time per week as a minimum.) If you are not comfortable with learning biological concepts, you will need to put in more time.
  - Note that while reading the materials is a minimum you should do, only relying on reading is also a poor study strategy. (e.g., it would be better to read through a chapter thoroughly once and use other study strategies than to read through a chapter three times)
  - There are services your student fees have already paid for, which could assist you in finding your best study strategies: e.g., Learning Center (<http://learningcenter.unc.edu/>), peer tutoring program (<http://learningcenter.unc.edu/find-a-tutor/>), OR Accessibility Resources & Service for those who suspect they may have a learning disability (<https://accessibility.unc.edu/>).

**GRADING:**

Course grade = (% Avg. exam \* .78) + (% Avg. quiz grades \* .08) + (% Avg. paper grades \* .08) + (% Avg. attendance grade \*.06)

A = 93-100%	C+ = 77-79%
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A- = 90-92%	C = 73-76%
B+ = 87-89%	C- = 70-72%
B = 83-86%	D+ = 67-69%
B- = 80-82%	D = 60-66%
	F = below 60%

**The professor reserves the right to make changes to the syllabus, including project due dates and test dates. If such changes are necessary, they will be announced as early as possible.**

**NOTE: CLASS MAY SOMETIMES BE AHEAD OR BEHIND THE SYLLABUS SCHEDULE. REGARDLESS OF WHAT IS OCCURRING IN CLASS, FOLLOW THE SYLLABUS ASSIGNMENT/QUIZ DEADLINES.**

- It is important that you thoroughly read through chapters BEFORE coming to class.
- It is also a good idea to bring a printout copy of the lecture outline (from Sakai) to class, to make note-taking more efficient.
- Please be aware that there will not be enough class time to discuss all concepts included in the chapters--but you are responsible for those concepts as well, so if you do not understand something from your readings, be sure to ask us about it.

Schedule	Topics	Assignment
T-1/12	Nerve Cells & Nerve Impulses	Chapter 1 <i>Receive .3% bonus towards exams by viewing the Voicethread about Class Policies and completing/submitting the Voicethread Class Policies Questions 1 by today, 6 AM.</i> <i>Be sure to be register for "UNC's" PollEverywhere before class:</i> <a href="https://www.poll Everywhere.com/register?p=1jac-1a5v">https://www.poll Everywhere.com/register?p=1jac-1a5v</a>
R-1/14	Nerve Cells & Nerve Impulses	Chapter 1 (Work ahead – note that on Tuesday, there are two things due.)
T-1/19	Nerve Cells & Nerve Impulses/Synapses	Chapter 1, Chapter 2 Chapter 1 Quiz due Action Potential paper due
R-1/21	Synapses	Chapter 2

		Chapter 2 Quiz due
T-1/26	Synapses/Anatomy & Research Methods	Chapter 3 Chapter 3 Quiz due
T-2/2	Anatomy & Research Methods	Chapter 3 Brain Research Methods paper due Receive .3% bonus towards exams by viewing the Voicethread about class Policies and completing/submitting the Voicethread Class Policies Question 2 by today, 6 AM.
<b>R-2/4</b>	<b>EXAM 1</b>	<b>Chapter 1, 2, 3</b>
T-2/9	Genetics, Evolution, Development, & Plasticity	Chapter 4 Chapter 4 Quiz due
R-2/11	Genetics, evolution, Development, & Plasticity	Chapter 4 Ferret paper due
T-2/16	Genetics, evolution, Development, & Plasticity/Vision	Chapter 4, Chapter 5
R-2/18	Vision	Chapter 5 Chapter 5 Quiz Due
T-2/23	Vision	Chapter 5 Vision paper due
R-2/25	Sensory Systems	Chapter 6 Chapter 6 Quiz due
T-3/1	Sensory Systems	Chapter 6 Auditory paper due
R-3/3	Sensory Systems	Chapter 6
<b>T-3/8</b>	<b>EXAM 2</b>	<b>Chapters 4, 5, 6</b>
R-3/10	Wakefulness & Sleep	Chapter 8 Chapter 8 Quiz due
<b>T-3/15</b> <b>SPRING</b> <b>BREAK</b>	*****	*****
<b>R-3/17</b> <b>SPRING</b> <b>BREAK</b>	*****	*****
T-3/22	Wakefulness & Sleep	Chapter 8 Sleep paper due
R-3/24	Internal Regulation	Chapter 9 Chapter 9 Quiz due
T-3/29	Internal Regulation/Reproductive Behaviors	Chapter 9, Chapter 10 Osmotic Thirst paper due
R-3/31	Reproductive Behaviors	Chapter 10 Chapter 10 Quiz due



T-4/5	Reproductive Behaviors	Chapter 10 Sexual Orientation paper due
R-4/7	Reproductive Behaviors/Learning & Memory	Chapter 10, Chapter 12
T-4/12	Learning & Memory	Chapter 12 Chapter 12 Quiz due
R-4/14	Learning & Memory	Chapter 12 Memory paper due
<b>T-4/19</b>	<b>EXAM 3</b>	<b>Chapters 9, 10, 12</b>
R-4/21	Psychological Disorders	<b>Bring in LAPTOP to complete course evaluations during class. Non-laptop devices will NOT count.</b> Chapter 14 Chapter 14 Quiz due
T-4/26	Psychological disorders	Chapter 14 Schizophrenia paper due
<b>SAT, April 30<sup>th</sup>, 8 Am, same classroom</b>	<b>CUMULATIVE FINAL EXAM</b>	<b>All chapters &amp; lectures listed on syllabus</b>