# PSY 3310, Biological Psychology, 3 Credits
# Spring 2024

**Course Description:** Overview of the mediating role of the brain and other parts of the nervous system in behavior. Topics may include function of neurons, sensation, brain development, movement, sleep, reproduction, language, emotion, and psychological disorders.

**Course Overview:** This course begins with important theoretical perspectives on the brain and behavior, followed by the cellular mechanisms of the nervous system. We then explore the research methods used to study the brain and get a brief exposure to the gross anatomy and development of the brain. In the second part of the course, we evaluate the role of the brain in specific behaviors including sleep, motivation, reproduction, emotion, and abnormal behavior.

Instructor: Jeffrey R. Stowell
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Office Hours: MW 9-10:30 am, T 11:00-Noon (Central Time zone)
You may contact me through phone, email, or chat/video using MS Teams. You can also schedule an appointment with me.

**Teaching Philosophy**
"The mind is not a vessel to be filled, but a fire to be kindled" --Plutarch

## Email
Generally, I do not check my work email account over the weekend or on holidays. Questions or issues that arise during these times will be handled the next regular workday. During the week, you can expect a reply within 24 hours.

## Course Prerequisite
PSY 1879 or PSY 1890, Introductory Psychology

## Course Materials
Biological Psychology, 13th edition (2019), by James W. Kalat.

## Course Learning Objectives (CLOs)
1. Recognize historical contributions in the study of Biological Psychology
2. Identify the major concepts and empirical findings in Biological Psychology
3. Use scientific reasoning to interpret phenomena in Biological Psychology.
4. Evaluate the strengths and weaknesses of basic research methods in Biological Psychology.
5. Demonstrate effective written communication skills.
6. Identify the complexity of individual differences related to biological causes.
7. Describe contexts in which principles of biological psychology apply to your life.
8. Enjoy learning about biological psychology!

Chapter-specific objectives are listed in the description of each chapter module in D2L.

## Requirements and Grading

| Requirement | Points | % of Final Grade |
|---|---|---|
| **Quizzes and Exams** | | |
| Chapter Quizzes | 250 | 50% |
| Final Exam | 50 | 10% |
| **Assignments and Activities** | | |
| Journal article critiques (2 x 40 points) | 80 | 16% |
| Online activities (5 x 10 points) | 50 | 10% |
| Sleep Diary/Analysis | 40 | 8% |
| **Class Participation** | 30 | 6% |
| **Total** | 500 | 100% |

Grading scale: A (90%), B (80%), C (70%), D (60%), F (<60%)

## Chapter Quizzes

- You *may* use your book, notes, and most Internet sources on the quizzes.
- You *may not*:
    - Utilize websites that have posted previous or current quiz questions or that offer artificial intelligence responses.
    - Offer help to others or receive help from others on the quiz.
    - Download, take photos, screen capture, or share quiz questions with others.
- Quizzes are designed to assess your fulfillment of the course objectives. Questions on the chapter quizzes are multiple choice and short answer from material covered in lecture and the textbook. The questions are based on the application of the information you have learned and will test your critical thinking and analytical skills.
- Quiz questions are selected randomly from a set of questions. Thus, you may end up with 2 or more questions that test the same concept and you will probably not have the exact same questions as another student, nor will your 2nd quiz attempt have all of the same questions as your first attempt.
- As part of a cumulative testing strategy, each quiz contains two additional questions from each of the prior modules. As such, each subsequent quiz will have more questions (and more time to complete them). See further explanation in D2L under "Getting Started."
- You will have two attempts at each quiz. If you take the quiz twice, I take the higher score of your two attempts (of the multiple-choice questions).
    - The short answer questions are the same for each attempt so I will only accept your answers for the <u>first</u> attempt on the short answer questions. You do not need to answer them on your second attempt--I'll just award the same number of points from your first attempt.
    - If you are happy with your 1st attempt score, it is not necessary to take it a second time. It is likely that you will get some of the same questions on both

attempts, so it is helpful to view your quiz results to see which ones you got wrong.

- o I recommend taking your first attempt after you have read the chapter and feel like you have a pretty good grasp of the information. Then, after you find out which questions you missed, study those topics until you have mastered them and then retake the quiz. Research on testing suggests that by simply asking students to retrieve information (i.e., testing), they are more likely to remember the information.

- After the quiz has been submitted, you can immediately view only the questions that you missed. Because the short answer questions cannot be graded automatically, they show up as "missed" points until I grade them.

- The quizzes are timed and the timer begins once you open the quiz. Please save each answer as you go in case something happens to your internet connection. You have 2 minutes for every point on the test. Although you can use your notes and books on the quizzes, you won't have time to look up every question. If you find yourself running out of time at the end on the short-answer question, just take a little more time to finish it up. It will still save your answers. Keep in mind that there may be some students who would use all the time no matter how much is granted and it's merciful for them to have an end to the quiz.

- If you have problems while taking a quiz, please complete the quiz at the next possible time. You may have a warning that your time has expired, but your answers will be saved. Then, send me an e-mail explaining why your time went over. D2L records all the quiz times.

- Quiz deadlines will be adjusted for students with University-approved absences. Remember, you can work ahead!

## Final Exam

Similar to the quizzes, the final exam is comprehensive and will contain questions selected from prior chapters.

## Online Activities (ed.ted.com)

The online activities provide you an opportunity to explore topics outside of class related to biological psychology that are brief, fun, and relatively easy.

There are five online activities at ed.ted.com, linked within their respective content modules in D2L. Please make sure you access them through these links in D2L and not simply a search on the ed.ted.com web site—there are multiple versions of the same lessons and only my customized lesson will earn you points. You will need to register on the https://ed.ted.com website and login **prior** to completing the linked online exercise. If you are not logged in prior to completing the online exercise, I will not have access to your submission.

Each of the ed.ted activities requires you to view a short video (3-5 minutes), then complete up to 5 multiple-choice/short answer questions. To access the ed.ted quiz, click on "Think" to the right of the video. Save each answer before moving to the next questions. Your performance on

your **<u>FIRST</u>** attempt of the online quiz will count toward your grade. However, you can watch the video as many times as you want before you take the quiz.

The website will automatically show you if you got each answer correct as you save them. Your grade will be manually entered in D2L within 2 business days after the due date.

## Journal Article Critiques

This assignment helps students gain skills necessary to read, interpret, and synthesize original research, which will be applicable in research methods, capstone courses, and other courses in the major. View the complete instructions in the D2L module titled "Journal Critiques."

The minimal requirements for this assignment <u>do not</u> meet the requirements for papers submitted to the electronic writing portfolio (EWP).

## Sleep Diary Analysis

See complete instructions in D2L.

## Class Participation

Using mobile devices for classroom polling can promote student participation and engagement. The benefits of using classroom polling include:

1. All students can respond to questions posed in class.
2. Students give more honest answers of what they are thinking and learning because their responses are anonymous to other students.
3. Students and instructors get immediate feedback about learning.
4. It works well with peer instruction, which has also been shown to increase student learning.

A portion of your grade will depend on audience participation using the polling software. If you participate in at least 70% of the class periods that I record participation, you will receive the full participation points. Below that, your participation points will be reduced accordingly. Tracking individual participant responses is done for the purposes of grading, instructional research, and course development.

## Technology Policy

- Cell phones should not be used during class, except with the instructor's permission. Texting or talking on cell phones disrupts the learning environment, especially for the person doing it :)
- Laptops may be used in class only for taking notes.

## YouTube PowerPoint Lectures

Narrated PowerPoint lectures are available on YouTube for each module. In addition, you can download the original PowerPoint files for taking notes if you wish. View the complete details under the "Getting Started" content module in D2L.

All EIU Students have free access to Office 365.

### Reading Schedule, Important Dates

Please read the chapters in the textbook before class to enhance understanding of demonstrations, examples, and group discussions. Please note this schedule is subject to change.

| Week | Date | Chapter Topic | Assignment Due |
|------|------|---------------|----------------|
| 1 | 8-Jan | Course Overview | |
| | 10-Jan | Intro: Mind-Brain, Biological Explanations, Careers | Ed.ted online activity: Creative Robots |
| | 12-Jan | 1.1 Cells of the Nervous System | |
| 2 | 15-Jan | **MLK Birthday Observed** | |
| | 17-Jan | 1.2 Nerve Impulse | |
| | 19-Jan | 1.2 Nerve Impulse | |
| 3 | 22-Jan | 2.1 Concept of the Synapse | |
| | 24-Jan | 2.2 Chemical Events of the Synapse | Journal Critique #1 |
| | 26-Jan | 2.2 Chemical Events of the Synapse | |
| 4 | 29-Jan | 2.2 Chemical Events of the Synapse | |
| | 31-Jan | 3.3 Research Methods | |
| | 2-Feb | 3.1 Structure of Nervous System | |
| 5 | 5-Feb | 3.1 Structure of Nervous System | |
| | 7-Feb | 3.2 Cerebral Cortex | |
| | 9-Feb | 4.1 Genetics and Evolution | |
| 6 | 12-Feb | 4.2 Development of the Brain | |
| | 14-Feb | 4.2 Development of the Brain | Journal Critique #2 |
| | 16-Feb | **Lincoln's Birthday Observed** | |
| 7 | 19-Feb | 4.3 Plasticity after Brain Damage | |
| | 21-Feb | 4.3 Plasticity after Brain Damage | Ed.ted online activity: Could the Brain Repair Itself? |
| | 23-Feb | 4.3 Plasticity after Brain Damage | |
| 8 | 26-Feb | Midterm Review (Jeopardy) | |
| | 28-Feb | 8.1 Rhythms of Waking and Sleeping | |
| | 1-Mar | 8.2 Stages of Sleep | |
| 9 | 4-Mar | 8.2 Stages of Sleep | Ed.ted online activity: Why Dream? |
| | 6-Mar | 8.2 Stages of Sleep | |
| | 8-Mar | 8.3 Why Sleep? Why Dreams? | |
| 10 | 11-Mar | 9.1 Temperature Regulation | |
| | 13-Mar | 9.2 Thirst | Sleep Diary |
| | 15-Mar | 9.2 Thirst | |

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|---|---|---|---|
| **11** | 18-Mar | Spring Break | |
| | 20-Mar | Spring Break | |
| | 22-Mar | Spring Break | |
| **12** | 25-Mar | 9.3 Hunger | |
| | 27-Mar | 9.3 Hunger | |
| | 29-Mar | 9.3 Hunger | |
| **13** | 1-Apr | 10.1 Sex and Hormones | |
| | 3-Apr | 10.2 Variations in Sexual Behavior | Ed.ted online activity: Attraction |
| | 5-Apr | 10.2 Variations in Sexual Behavior | |
| **14** | 8-Apr | 10.2 Variations in Sexual Behavior | |
| | 10-Apr | 11.1 What is Emotion? | |
| | 12-Apr | 11.2 Attack and Escape | |
| **15** | 15-Apr | 11.2 Attack and Escape | |
| | 17-Apr | 11.3 Stress and Health | Ed.ted online activity: Stress & the Brain |
| | 19-Apr | 14.1 Substance Abuse | |
| **16** | 22-Apr | 14.2 Mood Disorders | |
| | 24-Apr | 14.3 Schizophrenia | |
| | 26-Apr | Last lecture, final review | |
| **17** | 1-May | Final Exam 10:15 a.m.-12:15 p.m. | |

View the <u>university's academic calendar</u> for add, drop, and withdrawal deadlines.

## Grading Timeline

Your quizzes and online activities will be graded within 2 business days after the due date and writing assignments typically within 5 business days after the due date.

## Late Work Policy

Late work submitted after the deadline may be penalized by up to 20% of the points for the assignment. Requests for extensions of deadlines may be made for university-excused absences or for extenuating circumstances.

## Diversity Statement

Each of us comes from a unique cultural background influenced in many ways by the people with whom we interact and the surrounding structures of society. Diversity provides the opportunity to learn from one another and deepen our understanding and empathy for one another. Differing viewpoints are acceptable, but we can be inclusive by respecting, supporting, and valuing people who possess ideas different from our own. Students in this course should feel comfortable sharing their personal views without fear of reprisal. Discriminatory behaviors based on an individual's race, color, religion, sex, gender identity, sexual orientation, national origin, disability, age, marital status, political affiliation or other personal characteristics are not acceptable and may be referred to the Office of Civil Rights and Diversity.

## Academic Integrity

Students are expected to maintain principles of academic integrity and conduct as defined in <u>EIU's Code of Conduct</u>. Violations will be reported to the Office of Student Standards. Cheating,

plagiarism, and other forms of academic misconduct will not be tolerated. As a student, you have a personal responsibility to maintain high standards of academic conduct to preserve academic integrity. Academic misconduct will result in zero points for the assignment and appropriate disciplinary action, according to university guidelines.

## Students with Disabilities

If you are a student with a documented disability in need of accommodations to fully participate in this class, please contact the Office of Student Disability Services (OSDS). All accommodations must be approved through OSDS. Please stop by McAfee Gym, Room 1272, call 217-581-7208, or email studentdisability@eiu.edu to make an appointment. In addition to contacting OSDS, students are welcome to contact the instructor to make an appointment to discuss disability accommodation.

## Student Success Center

Students who are having difficulty achieving their academic goals are encouraged to contact the Student Success Center (SSC) for assistance with time management, test-taking, note-taking, avoiding procrastination, setting goals, and other skills to support academic achievement. The SSC provides individualized consultations. To make an appointment, call 217-581-6696, or go to McAfee Gym, Room1301.

## Early Alert System

Eastern maintains an Early Alert System (EAS) to help students know when they are not performing up to academic standards. Alerts may be given for poor attendance, not turning work in on time, or doing poorly on an assignment or test. EAS staff will contact you to help you find resources to help you be a successful student. Resources may include time management, study skills, test-taking, finding tutors, or other resources related to academic issues. I will use the EAS if I believe you could benefit from talking to a success coach about these issues.

## Booth Library

Located in the center of campus, Booth Library is the best place to do research, find expert help, or study in a calm, distraction-free environment. In addition to the many print resources, Booth provides access to high quality e-books, journals and scholarship not freely available on the Web. Stop by the Reference Desk or go to http://library.eiu.edu to explore library resources. Get expert help with your research by contacting the Booth Library reference librarians. Visit, call 581-6072, or go to http://booth.eiu.edu/ask to connect with a librarian.