

# BIOLOGICAL PSYCHOLOGY

PSYCH 3101 Fall 2024

<https://sites.uni.edu/desoto/biopsych.htm>

Sabin 15 T/Th 2:00 pm

Professor Catherine DeSoto, PhD

**Course Description:** This course is a study of the biological foundations of human behavior. Specifically, we will study the role of genetics, evolutionary history, hormones, brain structure and brain functioning, particularly as they influence human behavior.

**Required Text:** Shapiro, M.S. (2020). BioPsychology: Fundamentals and Contemporary Issues. Flatworld Press, Boston. ISBN: 978-1-4533-9293

**Course Objectives:** Students, upon successful completion of this course, will:

1. Compare different ways genetics and environment interact; defend the idea that genes and environment are not separate influences.
2. List the necessary criteria for natural selection to occur, and describe the evolutionary approach in psychology.
3. Recognize research techniques used in biological psychology. Correctly interpret findings from twin studies.
4. Explain how research findings from a biological perspective add to the understanding of psychology, including socialized behaviors.
5. Learn information about the human brain: specifically, describe the basics of neural transmission and label brain anatomy.
6. Recognize the specific biological foundations of perceptual experience, pathology, sex differences, and substance abuse.
7. Relate the foundations to the evolutionary approach to brain and behavior.
8. Complete a book report about topic of interest related to Biological Psychology.

**Course Requirements:**

1. Attendance is expected. Missing a class will harm your test performance. There is no substitute for being in class. If you miss a class, it is important to get the notes from someone in class and read the required pages.
2. Reading of assigned pages is assumed. If you do not read at least the pages assigned, you should not have any expectation that you will succeed in this course.
3. Students should expect to spend between 3-8 hours each week studying for this class. Individuals vary in their need to study, but it is unrealistic to expect to do well in this course without significant studying each and every week.
4. A test will be given approximately every 4 weeks. Each test will be multiple choice with short answer questions or essay questions. All exams are recorded as percent correct out of 100.
5. Final Exam will be comprehensive.

6. Students should listen closely and take notes during class-- but not word for word from the slides. Your memory and comprehension of class lectures will be your best preparation for tests.
7. Impromptu in-class writing assignments and occasional out of class web-based assignments will be given to help students assess their readiness for tests. Topics on these quizzes will likely appear again. Such quizzes will help and count for your grade -- but the primary purpose of any quiz is to reinforce your learning.
8. A written book review is required during week 13. More information is below.

**Makeup Exam Policy:** Missing class on an exam day is STRONGLY discouraged.

Students who must miss for a school-sponsored event or military-duty can arrange for their exam make-up PRIOR to the exam date. If you must miss for Covid-19, a make-up exam will be arranged. Other requests for make-ups are at the discretion of the instructor – I can and do say no. Requests from students who are making satisfactory progress in the course and attend regularly will be considered. Make-Up exams are typically essay format.

**Student Evaluation:** The purpose of the grade is to provide an indication of how well you mastered the course material. Final grades will be determined according to the following criteria:

EXAM/Unit 1	100
EXAM/Unit 2	100
EXAM/Unit 3	100
FINAL (counts twice)	200
<u>Book Report</u>	<u>50</u>
Total Pts. Possible:	550 points

Final grades will be determined based on the number of available points you have earned at the end of the semester. In-Class writing and out of class web-based work count, they appear as added points to exam scores.

The following scale will be used to assign final course grades.

A	= 90% of points possible	(e.g., $.9 \times 550 = 495$ .	495- 550 pts is the A range)
B	= 80-90%	( $.8 \times 550 = 440$ .	440- 494 pts is the B range)
C	= 70-79%	( $.7 \times 550 = 385$ .	385- 439pts is the C range)
D	= 60-69%	( $.6 \times 550 = 330$ .	must have 330 pts to have a passing grade)
F	= less than 60%		

If you are within 2 percentage points of the next higher grade, you will get a “plus”.

If you are within 2 points of the next lowest grade, you will get a “minus”.

## FAQ's :

### **Tell me more about the book report?**

This is your chance to delve into that topic you wanted to learn more about. Based on your preference, read one of curated books and prepare a written report.

Essentially - you will read one of several [books offered by your professor](#) and write a 1000-word summary. This is about four pages, double spaced. Your summary should clearly convey that you read and (mostly) understood the content of the book. The book report is a summary of the information and views provided, it is not a book review nor an opinion of the expert's ideas.

### **What if I miss a Quiz or In Class Writing Activity?**

You can earn the points by typing a one-page summary paper of the lecture topic -- emphasizing the quiz/activity topic. The writing should reflect the lecture content, be written in paragraph format, and be handed in within two weeks of the missed quiz to ensure full credit.

### **How can I see which questions I missed on an exam?**

After you take the exam and hand in your answer key and exam, you may take a key and look at the correct answers. Portions of the test will be reviewed in class. You can look at the test more closely later during your TA's office hours or by appointment.




### **What is the most important to be successful in this class?**

Come to class. *Don't miss class*. Listen to lecture info and try to understand key concepts during the class. Ask about an idea if you sense you do not understand it (ideally right during class, but immediately after is also a good time!).

Instructor's Office  
Instructor's Email  
Office hours:

2062 Bartlett Hall (best to enter via Door S3)  
[cathy.desoto@uni.edu](mailto:cathy.desoto@uni.edu)  
Thursday 11:00 – 12:00; (and other times as needed- just ask)

OTHER INFORMATION

	<p>This class is probably more conceptual than you are used to, and it requires time and effort to understand the concepts. This course assumes you are interested in the subject matter and are able to read at the college level.</p>
	<p>Class periods will usually involve statements by the instructor and a period of note taking. Learn to take notes the right way.</p> <p>At the end of some classes there may be a quiz or written work over that day's discussion. These will be for extra points on the upcoming test.</p> <p>Students should not expect everything that will be covered on the tests to be covered in class. Students should read the assignments outside of class and consider class time as a period to delve into and expand on key topics.</p>
	<p>Your teacher is available to help you on an individual basis during office hours <b><u>and many other times by appointment</u></b> or as needed.</p> <p>Your grade will be a reflection of how well you have mastered the content of the course. Be prepared to attend class, to read the text and to study, and we will be prepared to help any student who shows a sincere desire to learn.</p>

This course meets the Course Credit Hour Expectation outlined in the UNI Course Catalog. Students should expect to work approximately 2 hours per week outside of class for every course credit hour.

Helpful Links:

Final exam schedule: [final exam schedule](#)

Good info on emailing a prof: [how-to-email-your-professor-without-being-annoying-](#)

About your professor: <https://sites.uni.edu/desoto/>

All UNI students can take advantage of The Learning Center @ Rod Library (TLC) for assistance with writing (e.g. make-up quizzes) and/or study strategies. Located on the main floor of Rod Library. Students are welcome to stop in for immediate assistance or schedule an appointment. TLC tutors and coaches are available to meet with students in-person at Rod Library or via Zoom.

Statement of Ethics: Students must observe the Academics Ethics Policies (<http://www.uni.edu/policies/301>). Instances of cheating and plagiarism will be dealt with on an individual basis, but understand that cheating and/or plagiarism are unacceptable and may result in an "F" for the course.

**Office of Compliance and Equity Management** The University of Northern Iowa does not discriminate in employment or education. Visit 13.03 Equal Opportunity & Non-Discrimination Statement (<https://policies.uni.edu/1303>) for additional information.

**Student Accessibility Services.** The University of Northern Iowa (UNI) complies with the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), Section 504. To request accommodations please contact Student Accessibility Services (SAS), located at ITTC 007, for more information either at (319) 273-2677 or Email [accessibilityservices@uni.edu](mailto:accessibilityservices@uni.edu). Visit Student Accessibility Services (<https://sas.uni.edu/>) for additional information. Most students find it helpful to speak briefly with their professors regarding their accommodation needs and preferences.

***Special (required by admin) Syllabus Statement Regarding COVID for F2F and Hybrid courses:***

*Protecting our campus from COVID-19 depends on all of us acting with care and responsibility. To protect each other and our campus community, we are required to wear masks or face shields that cover our mouths and noses inside all campus buildings, including throughout the duration of class. We are asked to self-screen for COVID-19 symptoms, stay away from others and seek medical attention if we're not feeling well and/or experience any symptoms such as a fever over 100.4, and to communicate and plan proactively to make up for missed learning. We will maintain physical distancing by sitting in designated areas in the classroom. In order to facilitate contact tracing, Black Hawk County requires us to sit in assigned seats, and you are asked to adhere to your assigned seat. If your assigned seat does not work well for you, please notify me immediately so that we can work together to reassign you. Failure to follow these requirements can result in students being referred to the student conduct process and faculty being referred to the Associate Provost for Faculty. We take these steps together recognizing that my mask protects you, your mask protects me, and together wearing masks protects the entire UNI community. Our collective actions will determine our ability to remain together in an in-person learning environment.*

***Special (required by admin) Syllabus Statement Regarding COVID Absences***

*Faculty must be prepared to offer online instruction and/or have assignment alternatives for individual students who are unable to attend class due to COVID-related health issues. To utilize these alternative delivery methods and/or assignments, students must report the issue by completing the Panther Health Survey; students directed not to come to campus or who are unable to participate in class due to COVID-19 related illness, self-isolation, or quarantine should utilize the information provided in the survey to have their faculty notified of their need to be absent. These same instruction/assignment alternatives should also extend to field experiences that students may not be able to attend for the same reasons. Questions related to COVID-19 testing should be directed to the Student Health Center COVID Hotline (319) 273-2100, Monday-Friday 8:00 am - 4:30 pm.*

## TENTATIVE\* COURSE CALENDAR AND EXAM STUDY GUIDE

\*THIS MAY BE REVISED AS NEEDED.

**Needed revisions will be announced**

DATE	CLASS INFORMATION
<b>Week 1</b> <b>Aug 16-30</b>	Introduction, syllabus, what is biopsychology?, Text book Chapter 1, Sect 1.5, 1.5. Intro to methods. Begin chapter 2.
<b>Week 2</b> <b>Sept 2-6</b>	Neural Transmission, research methods. Chapters 2, 3 and 4. <i>Text reading strategy and pages will be announced in class.</i> Neuroanatomy; Chapt. 3.— use text to support lectures (and Not vice versa). No PNS questions. No ISPS.
<b>Week 3</b> <b>Sept 9-13</b>	Functional Neuroanatomy. Research methods of Biopsychology
<b>Week 4</b> <b>Sept 16-20</b>	Finish neural transmission. Basics of pharmacology.  Review
<b>Week 5</b> <b>Sept 23-27</b>  <b>Exam 1</b>	<b>EXAM 1</b> likely Tuesday Sept 24 (covers notes and chapters 1, 2, 3 and 4. Neural transmission.) <i>No questions on summation, IPSPs or EPSPs. For Ch 3 and 4 especially: Study primarily from notes, figures and quiz/writings</i>  Begin Nature and Nurture
<b>Week 6</b>  <b>Sept 30-Oct 4</b>	Chapter 5 Genetics. Natural Selection and Human Behavior, Nature via Nurture. Epigenetics  Chapter 6: Brain enhances visual stimuli to <u>construct</u> perception. Note pages/information that show the brain does <i>more</i> than record light patterns Read all <i>pages related to lecture topics</i> . On/Center Off/Center cells. Edge enhancement..
<b>Week 7</b> <b>Oct 7-11</b>	Finish Perception: Color Constancy. Dorsal and Ventral. LGS pathway Chapter 7 . Brain and Language chapter - as time allows

<b>Week 8</b> <b>Oct 14-18</b>	Chapter 9: Why how and why of sleep. Sleep video and content  Review for test and comments on Book Report Content
<b>Week 9</b> <b>Oct 21-25</b>  <b>Exam 2</b>	Review for test and talk about Book Report ( <b><u>Which book are you reading?</u></b> )  Exam 2: likely Oct 24 (Ch 5, 6 ,7 9, <b>emphasize Lecture content</b> )
<b>Week 10</b> <b>Oct 28-Nov 1</b>	Chapter 11: Hormones, Sex Differences. Attraction. Hormones and Sex Differences research. HPA axis, Stress, Cortisol Hormones and Comparative Approach, Research on Sex Differences.
<b>Week 11</b> <b>Nov 4 – 8</b>	Begin Addiction and Recreational Drugs (chapters 14 and 15) Addiction, The Hijacked Brain video and discussion
<b>Week 12</b> <b>Nov 11-15</b>	(lecture content over hormones, sex differences, drugs, and addiction research - portions of chapters 11, 12, 14 and 15).
<b>Week 13</b> <b>Nov 18-22</b>	<b>Recommended book report turn in date: Tuesday Nov 19</b>  Exam 3 Nov 21  <b>Last chance to Turn in Book Report:</b> Thurs., Nov 21, 4 pm
<b>Week 14</b> <b>Dec 2-6</b>	BioPsych of serious mental illness; chapter 16
<b>Week 15</b> <b>Dec 9- 13</b>	<u>Overview how to find and use</u> research of interest in peer reviewed journals.  Review for Final.

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Week 16: Final  
Exam **Comprehensive**

1:00 pm, Wednesday, Dec. 18