

FIU – Department of Psychology  
PSB4002 – U01 – Introduction to Biopsychology

CLASS MEETINGS

---

Tuesday/Thursday 12:30 – 1:45 pm (Ryder 120)

INSTRUCTOR

---

Dr. Eliza Nelson

Office Hours: Tuesday/Thursday 11:00 am – 12:00 pm (DM 201A)

Email: [elnelson@fiu.edu](mailto:elnelson@fiu.edu)

GRADUATE TEACHING ASSISTANT

---

Dea Garic

Office Hours: Tuesdays 2:00 – 4:00 pm (DM 248F)

Email: [dgari004@fiu.edu](mailto:dgari004@fiu.edu)

**Note:** You do not need an appointment to come to office hours. We are available in our offices during the posted times and see students on a first-come, first-serve basis. If you cannot make it during the posted times, please email us to make an appointment. If you are struggling with the material, we want to see you! Do not wait until it's too late in the semester to get help!

EMAIL POLICY

---

Please address your email “Dear Dr. Nelson” or “Dear Dea” and sign your name at the bottom. We reserve the right not to respond to ‘hey you’ or otherwise unprofessional emails. Blackboard does not alert us to messages; do not use the Blackboard system to contact us. Typically, we will respond to email within 1 day ([elnelson@fiu.edu](mailto:elnelson@fiu.edu) or [dgari004@fiu.edu](mailto:dgari004@fiu.edu)).

CLASSROOM POLICIES

---

Please be respectful of class time and of your peers. Kindly refrain from talking, texting, or using technology for non-class related activities. If you are disruptive, we reserve the right to ask you to leave. Arriving late and leaving early is distracting for everyone; please don't do it. **Keep in mind that you cannot turn in your CPA if you arrive to class late.**

COURSE GOALS

---

This course is an introduction to the biological foundations of behavior and is divided into four parts: (1) the neural foundations of behavior, (2) motivation and emotion, (3) sensory systems, and (4) complex behavior. Topics include nervous system organization, drugs and addiction, movement, learning and memory, psychological disorders, and sleep and consciousness.

By the end of the course, you will be able to:

- Describe and explain how the nervous system works
- Critically discuss the reciprocal relationship between biology and psychology
- Understand typical and atypical brain-behavior relationships

## REQUIRED TEXT

---

- *Brain & Behavior: An Introduction to Biological Psychology, 4<sup>th</sup> edition* (© Garrett)
- **Do not buy a previous edition. Make sure you have the 2015 version.**
- **The online resources for this textbook are free: <https://edge.sagepub.com/garrett4e>**
- **PowerPoint slides are not a substitute for reading the textbook.**

## RECOMMENDED TEXT

---

- *Study Guide to Brain & Behavior 4<sup>th</sup> edition* (© Hough)
- **You can purchase the study guide for \$5 if you buy the bundle in the FIU bookstore.**
- **The study guide costs ~\$30 when purchased separately through online retailers.**

## DISABILITY ACCOMODATIONS

---

Disability students must submit DRC paperwork in the first week of class for accommodations: [drc.fiu.edu/students](http://drc.fiu.edu/students)

## ACADEMIC INTEGRITY

---

Any instance of academic misconduct (e.g., plagiarism, cheating, collusion, dishonesty) will be reported to the University and Department of Psychology for further action. Please refer to your student handbook, or ask me if you are unsure about what constitutes misconduct. Details can also be found at this website: [https://ugrad.fiu.edu/academic\\_misconduct/](https://ugrad.fiu.edu/academic_misconduct/)

**The policy for this course is an automatic “0” for academic misconduct on an exam.**

**You may not work together with another student on Course Preparation Assignments (CPAs). You must write CPAs in your own handwriting and your own words to receive credit.**

## COURSE PREPARATION ASSIGNMENTS (CPAs)

---

For each lecture, there is a course preparation assignment (CPA) due. The CPA is 1 question based on the assigned material for that day. Your answers must be handwritten in your own words and should be ½ - 1 page. The CPA is due at the start of class – no exceptions. You may not turn in the CPA late (i.e., it cannot be completed during lecture). There is a 10-minute grace period to get your CPA turned in on time in the event of a parking/weather mishap. This grace period means that after 12:45 pm, your CPA is late and will not be accepted. CPAs are graded pass/fail on effort. Students are not permitted to work together on CPAs.

**CPAs are directly tied to your final grade. For a student to get a particular course grade, s/he must meet or exceed each category of work (CPAs and Major Exams). For example, if a student gets an A average on the exams, but earns credit for only 75% of the CPAs, s/he will receive a C in the course. If a student earns credit for 90% of the CPAs, but gets a C average on the exams, s/he will also receive a C in the course. You cannot skip class and expect to pass.**

***An “A” student does “A” work on exams and comes to class prepared at least 90% of the time.***

MAKING UP CPAs

If you miss class and have an excused absence, you will be given credit for the CPA by default when you turn in your documentation. If you miss class and have an unexcused absence, you must make up the lecture that you missed in order to receive credit for the CPA that was due. To make up a lecture, send an email to Dea ([dgari004@fiu.edu](mailto:dgari004@fiu.edu)) to request a make-up slot. If you reserve a slot and do not show up, you will not be allowed to make another appointment. When you come to your appointment, Dea will go through the slides you missed from lecture and discuss the CPA with you. At the end of the appointment, you will sign for make-up credit. The purpose of this policy is to ensure you receive every opportunity for learning in this course. We are committed to your success, and do not want to see any of our students fall behind.

**Remember, you can miss 2 CPAs without penalty. The policy is for missing more than 2 CPAs.**

NON-CUMMULATIVE EXAMS

There are 4 in-class exams worth 100 points each. *Any material covered during the dates for each exam is fair game including, but not limited to, readings, slides, videos, and guest lectures.* The format for exams may include multiple choice, matching, true or false, and short answer. Once an exam has been turned in, you will not be allowed to take the test if you arrive late.

**There are no make-ups for exams without dated documentation of an excused absence.**

Exam 1 = September 17 <sup>th</sup>	100 pts	Material from 08/27-09/15
Exam 2 = October 13 <sup>th</sup>	100 pts	Material from 09/22-10/08
Exam 3 = November 3 <sup>rd</sup>	100 pts	Material from 10/20-10/29
Exam 4 = December 3 <sup>rd</sup>	100 pts	Material from 11/05-12/01

**Your exam scores are averaged at the end of the course. You must meet or exceed your CPAs.**

**This course uses the FIU Early Alert System. Alerts are sent after the first exam.**

GRADING

CPAs	Exam Average	Course Grade
Credit on $\geq 90\%$ (18-20/20)	Average $\geq 90\%$	A/A-
Credit on $\geq 80\%$ (16-17/20)	Average $\geq 80\%$	B+/B/B-
Credit on $\geq 70\%$ (14-15/20)	Average $\geq 70\%$	C+/C/C-
Credit on $\geq 60\%$ (12-13/20)	Average $\geq 60\%$	D+/D
Credit on $< 60\%$ (0-10/20)	F (59% and below)	F

**You cannot pass the course if you do not attend lecture and turn in your CPAs on time. Attendance is not optional. You also will not pass the course if you do poorly on exams. You will earn your exam average as long as you meet or exceed that level of CPA credit.**

**There is no final exam in this course.**

To determine your final letter grade, use the conversion chart below:

#### LETTER GRADE CONVERSION

---

A: 94-100%	A-: 90-93%	B+: 87-89%	B: 83-86%	B-: 80-82%	
C+: 77-79%	C: 73-76%	C-: 70-72%	D+: 67-69%	D: 60-66	F: 59 & below

**You must earn a “C” or greater for the Psychology major.**

#### ABSENCE POLICY

---

Make-up work is only permitted for excused absences with documentation. This includes, but is not limited to, doctor’s excuses (for yourself or immediate relatives), athletic events, FIU-related scholarly events (e.g., conference), death in the family, religious observances, or auto accident (not a traffic jam). Work-related excuses will be handled on a case-by-case basis. Approved work-related excuses are one-time absences, not regular occurrences. Vacation is not a one-time occurrence. Weather is not an excused absence. Traffic and parking are not excused absences. Please do not take this class if it conflicts with your work schedule. Also, keep in mind that documentation must be dated for the assignment or exam that you missed. As soon as you are able to, contact Dr. Nelson directly by email ([elnelson@fiu.edu](mailto:elnelson@fiu.edu)) to discuss your situation. Dea cannot excuse absences or adjust grades.

#### EXTRA CREDIT POLICY

---

There are two ways to earn extra credit in this course: (1) Answering bonus questions correctly on exams and (2) Completing article assignments. For each chapter, there are accompanying articles on the SAGE textbook website (<https://edge.sagepub.com/garrett4e>). For each article, there is a set of posted questions (typically 3 per article). You must answer all the questions for the article you chose. Responses are graded on effort. You are allowed to do 1 article per chapter. Extra credit will post to a separate column in your gradebook on Blackboard so that you can track it throughout the semester. You can earn 1 point per question. Extra credit is added to your total exam points to create an adjusted exam average. You cannot use extra credit towards CPAs; you must make-up missed CPAs by attending make-up tutoring slots.

Type your extra credit and submit a Word document or a PDF by email directly to Dr. Nelson ([elnelson@fiu.edu](mailto:elnelson@fiu.edu)). Assignments are not accepted through Blackboard or in print copy. Make sure your name and PID are at the top of the document, and in the file name. Type the chapter number and the citation of your article (copy from webpage) at the top of the file. For each question, type the question first, and then your answer underneath. You should aim for 2-3 sentences per question. If you do not format your assignment correctly, it will be returned to you. If you are planning to submit more than one article, please put all of your articles into the same file and send one attachment when you’re finished, rather than 15 separate emails.

**Extra credit can be turned in any time, but the deadline is December 1<sup>st</sup> at the start of class. No late extra credit assignments will be accepted. There is no exception to this policy, and no other options to improve your grade in the course. Do not ask for a grade adjustment.**

### TIPS FOR SUCCESS IN THIS COURSE

1. Give yourself ample time to do the readings. Read each section as assigned before class.
2. Do the CPAs and come to class regularly.
3. When you're in class, be in class. Take your own notes. Put away your devices and focus.
4. When you're preparing for the exam, work through everything on the study guide.
5. If you don't understand something on the study guide, come to office hours. Ask!
6. Do not cram. Study over multiple days. Get a good night's sleep before the exam.
7. Do not wait until the last minute to do your extra credit. Get assignments in early!

### LECTURE SCHEDULE

Subject to change. All readings and CPAs are due on the date indicated.

	<b>TUESDAY "A"</b>	<b>THURSDAY "B"</b>
Week 1	<b>08/25: Syllabus</b> Reading Due: NA CPA Due: NA	<b>08/27: What is Biopsychology?</b> Reading Due: pp. 1-16 CPA Due: NA
Week 2	<b>09/01: Cells that make us who we are</b> Reading Due: pp. 23-35 CPA Due: #1	<b>09/03: How neurons communicate</b> Reading Due: pp. 36-49 CPA Due: #2
Week 3	<b>09/08: CNS and PNS organization</b> Reading Due: pp. 55-76 CPA Due: #3	<b>09/10: Nervous system development</b> Reading Due: pp. 76-88 CPA Due: #4
Week 4	<b>09/15: Methods and ethics of research</b> Reading Due: pp. 95-123 CPA Due: #5	<b>09/17: EXAM 1</b> Chapters 1-4 All material from 8/27-9/15
Week 5	<b>09/22: Drugs and addiction</b> Reading Due: pp. 129-154 CPA Due: #6	<b>09/24: Drugs and addiction</b> Reading Due: NA (continued from 5A) CPA Due: #7
Week 6	<b>09/29: Motivation and internal states</b> Reading Due: pp. 159-175 CPA Due: #8	<b>10/01: Obesity and eating disorders</b> Reading Due: pp. 176-192 CPA Due: #9
Week 7	<b>10/06: Biology of sex and gender</b> Reading Due: pp. 197-226 CPA Due: #10	<b>10/08: Emotion and health</b> Reading Due: pp. 231-257 CPA Due: #11
Week 8	<b>10/13: EXAM 2</b> Chapters 5-8 All material from 9/22-10/8	<b>10/15: NO CLASS</b> <b>Dr. Nelson away at SSHD conference</b>
Week 9	<b>10/20: Hearing and language</b> Reading Due: pp. 263-297 CPA Due: #12	<b>10/22: Vision</b> Reading Due: pp. 303-334 CPA Due: #13
Week 10	<b>10/27: Movement</b> Reading Due: pp. 354-367 CPA Due: #14	<b>10/29: Body senses</b> Reading Due: pp. 339-353 CPA Due: #15

Week 11	<b>11/03: EXAM 3</b> Chapters 9-11 All material from 10/20-10/29	<b>11/05: Learning and memory</b> Reading Due: pp. 373-398 CPA Due: #16
Week 12	<b>11/10: Learning and memory</b> Reading Due: NA (continued from 11B) CPA Due: #17	<b>11/12: Intelligence</b> Reading Due: pp. 403-434 CPA Due: #18
Week 13	<b>11/17: Psychological disorders</b> Reading Due: pp. 439-476 CPA Due: #19	<b>11/19: Psychological disorders</b> Reading Due: NA (continued from 13A) CPA Due: #20
Week 14	<b>11/24: Sleep and dreaming</b> Reading Due: pp. 481-499 CPA Due: NA	<b>11/26: NO CLASS</b> <b>Thanksgiving Holiday</b>
Week 15	<b>12/01: Consciousness</b> Reading Due: pp. 499-515 CPA Due: NA – LAST DAY EXTRA CREDIT	<b>12/03: EXAM 4</b> Chapters 12-15 All material from 11/5-12/1

---

LIST OF CPA Questions

---

*EXAM 1 MATERIAL*

**CPA #1:** What would be the effect if there were no constraints on the free flow of ions across the neuron membrane?

**CPA #2:** Imagine what would happen if the nervous system used only one neurotransmitter.

**CPA #3:** Patients with damage to the right parietal lobe, the temporal lobe, or the prefrontal cortex may have little or no impairment in their intellectual capabilities, yet they show deficits in behavior that seem inconsistent for an otherwise intelligent individual. Does this modify your ideas about how we govern our behavior?

**CPA #4:** What strategy do you think has the greatest potential for restoring function in brain-damaged patients? Why?

**CPA #5:** Do you think the rights of humans and animals are adequately protected in research? Why or why not? What would be the effect of eliminating the use of animal subjects?

*EXAM 2 MATERIAL*

**CPA #6:** Is it morally right to treat addictions with drug antagonists, aversive drugs, and antidrug vaccines? Is your opinion the same for drug agonists?

**CPA #7:** You work for an agency that has the goal of substantially reducing the rate of drug abuse in your state through education, family support, and individualized treatment. Based on your knowledge of addiction, what should the program consist of?

**CPA #8:** Several of the controls of eating seem to duplicate themselves. Is this wasteful or useful? Explain.

**CPA #9:** What do you think a complete program of obesity treatment would look like?

**CPA #10:** Do you think the cognitive differences between males and females will completely disappear in time? If not, would they in an ideal society? Explain your reasons.

**CPA #11:** Stress and pain involve considerable suffering, but they are necessary. Explain. What makes the difference between good and bad stress and pain?

*EXAM 3 MATERIAL*

**CPA #12:** Make the argument that chimps possess language, though at a low level. Then argue the opposite, that their behavior does not rise to the level of language.

**CPA #13:** Explain why the visual system analyzes an object's edges, texture, and color and then detects the object, instead of the other way around.

**CPA #14:** Judging by the examples given of movement disorders, what are the points of vulnerability in the motor system?

**CPA #15:** Imagine a robot with a humanlike body. It is programmed to walk, reach, and grasp. It has visual and auditory capacities, but no body senses. What would its movement be like?

*EXAM 4 MATERIAL*

**CPA #16:** If you were building an electronic learning and memory system for a robot, is there anything you would change from the human design? Why or why not?

**CPA #17:** Which direction of research for the treatment of Alzheimer's do you think holds the greatest promise? Why?

**CPA #18:** Intelligence is subject to physical disorders and genetic and environmental deviations. Speculate about why intelligence is so vulnerable.

**CPA #19:** Give an overview of what produces deviation behavior (going back to earlier chapters as well as this one). What effect does this have on your ideas about responsibility for one's behavior?

**CPA #20:** What was your favorite topic of the semester, and why?

**Remember, your final grade in the class depends on both CPA effort and exam performance. If your CPA and Exam grades do not match, you will earn the lower grade for the course.**

**You must earn a "C" or better for the Psychology major.**