

# PSB 3340: Behavioral Neuroscience

University of Florida

Fall 2023

**Meeting Times:** Tuesday 9:35-10:25; Thursday 9:35-11:30

**Location:** PUGH 170

**Instructor:** Matt (Wendel) Friedl, Ph.D.

**Office hours:** One hour following class Tuesdays & Thursdays. Other days/times by request.

**email:** Please use Canvas messaging; alternate email: wfriedl@ufl.edu

**Office:** Psychology 017 (basement level)

\*I reserve the right to revise the syllabus in order to accommodate the needs of the course. Any updates will be posted to the course announcements section of Canvas.

Graduate TAs	Office hours	Office location
Trevor Caruso	Tue 11:30-12:30	Zoom
Kat Driver	Wed 10:00-11:00	Zoom
Undergraduate TA		
Esmeralda Hechavarria	TBD	TBD

**email:** Please use Canvas messaging to contact TAs

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### Course Description

This course provides a broad background in the neural basis of human behavior. This is an in-depth introductory course covering how—as far as is currently understood—thoughts, actions, and feelings arise from the biology, anatomy, and physiology of the nervous system.

This course is required both for students in the Behavioral and Cognitive Neuroscience track and the Interdisciplinary Studies (IDS) Neurobiological Sciences major. This course is a prerequisite for all 4000-level PSB courses.

- UNIVERSITY OF FLORIDA GENERAL EDUCATION COURSES

As part of the general education curriculum, this class pursues 3 broad categories of student learning outcomes (SLOs):

Category	Institutional Definition	Institutional SLO
<b>Content</b>	Content is knowledge of the terminology, concepts, methodologies, and theories used within the subject area.	Students demonstrate competence in the terminology, concepts, methodologies, and theories used within the subject area.
<b>Critical Thinking</b>	Critical thinking is characterized by the comprehensive analysis of issues, ideas, and evidence before accepting or formulating an opinion or conclusion.	Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the subject area.
<b>Communication</b>	Communication is the development and expression of ideas in written and oral forms.	Students clearly and effectively communicate knowledge, ideas, and reasoning in written or oral forms appropriate to the subject area.

This course is part of the Biological Sciences subject area, as described below:

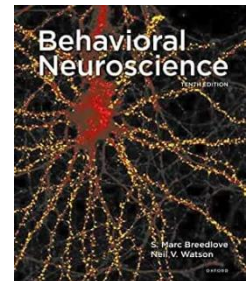
*Biological science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the life sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern biological systems. Students will formulate empirically-testable hypotheses derived from the study of living things, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.*

## Course Requirements and Policies

### Required Readings

- Behavioral Neuroscience, 10<sup>th</sup> ed. (2023), by S. M. Breedlove and N. V. Watson. ISBN# 9780197616857 (print) or ISBN# 9780197616888 (eText)

The latest (10<sup>th</sup> edition) of the text is strongly recommended. Older versions (8<sup>th</sup> or 9<sup>th</sup> editions) will likely suffice; however, be aware that there are some differences between older versions and the latest version. Two chapters—Chapter 17, Learning and Memory, and Chapter 18, Attention and Higher Cognition—have “significant” updates in the latest edition.



- There is one copy of the 10<sup>th</sup> edition at Library West, available for 2-hour blocks.

### Course Prerequisite

An introductory course in biology (BSC2010).

## Other Requirements

- ACCESS TO OFFICIAL UF E-MAIL ACCOUNT.

Check your UF e-mail regularly (daily). All course announcements, including any modifications to this syllabus, will be communicated via e-mail and Canvas announcements. Any grade-related information will only be sent to a UF e-mail address or discussed in-person.

- COMPUTING / TECHNOLOGY REQUIREMENTS.

This course requires adherence UF's minimum technology requirements (recommendations [here](#)). These include a computer with webcam, microphone, speakers, and access to a stable internet connection.

A wired connection is recommended when taking quizzes and/or exams.

- A dedicated room for online assessments is available in UF Library West. To make a reservation for a time of high demand go to the following website: <http://ufl.libcal.com/spaces?lid=4458&gid=8873>
- Other on-campus computer options can be found here <https://labs.at.ufl.edu/>

For technical support, contact the UF Help Desk: <https://helpdesk.ufl.edu/>.

In the event of a technical problem, a support ticket must be obtained from the UF help desk. Technical support will be able to diagnose and certify the source of any problem. Course instructor will not respond regarding *any* technical problems that do not have a prior support ticket from the UF helpdesk—include this support ticket # when communicating the problem.

- QUIZ AND EXAM PROCTORING

Quizzes and exams for this course are accessible only through Canvas using the Respondus LockDown Browser.

You will need to download this application if you have not done so previously. Go to: <https://download.respondus.com/lockdown/download.php?id=364713981>

Attempting a quiz or exam using any other browser (Safari, Firefox, Chrome, etc.) will bring up the following:

### Respondus LockDown Browser Required

This quiz requires Respondus LockDown Browser. Please launch Respondus LockDown Browser to take this quiz or view your quiz results.

If you have not already installed the browser, please download it from here: [\[Download Respondus LockDown Browser\]](#) ↗

## Course Policies

- ACCOMMODATION FOR DISABILITIES

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). **Accommodations are not retroactive**, so students should contact the office as soon as possible in the term for which they are seeking accommodation. Documentation should be provided prior to taking quizzes or exams – the earlier the better. The Dean of Students Office will provide documentation (an accommodation letter) to the student and the instructor.

- RELIGIOUS OBSERVANCES / UF SPONSORED ACTIVITIES

A student needs to inform the instructor if religious observances of their faith or UF sponsored activities (e.g. sports, student government, etc.) will conflict with scheduled quizzes or examinations **prior to** the class or occurrence of that test or activity.

- ILLNESS OR OTHER PERSONAL EMERGENCIES

For any medical conditions, psychological conditions, illnesses or injuries that prevent completing scheduled quizzes or examinations, the student should notify the instructor as soon as possible and arrange to provide supporting documentation. The student healthcare center (<https://shcc.ufl.edu>) can provide verifications of visits, as well as excuse notes in certain situations (see <https://shcc.ufl.edu/forms-records/excuse-notes/>).

- Counseling and wellness center: <http://www.counseling.ufl.edu/cwc/Default.aspx>
- University Police Department: 392-1111 or 9-1-1 for emergencies.

- SEXUAL HARASSMENT

Sexual Harassment is not tolerated in this class, in the Department of Psychology, or at the University of Florida. Sexual harassment includes: the inappropriate introduction of sexual activities or comments in a situation where sex would otherwise be irrelevant. All UF employees and students must adhere to UF's sexual harassment policy which can be found here: <https://hr.ufl.edu/forms-policies/policies-managers/sexual-harassment/>. Please review this policy and contact a university official if you have any questions about the policy.

As mandatory reporters, university employees are required to report knowledge of sexual harassment to UF's Title IX coordinator. For more information about UF's Title IX office see: <https://titleix.ufl.edu/>. You can also complete a Sexual Harassment Report online (Title IX) at: <https://titleix.ufl.edu/title-ix-reporting-form/>.

- COURSE EVALUATIONS

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Students will be notified when the evaluation period opens and can complete evaluations through the e-mail they receive from GatorEvals. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

- ACADEMIC HONESTY

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

**"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

Students who share information pertaining to course content from quizzes or exams will be referred to Student Conduct and Conflict Resolution (SCCR) Office in the Dean of Students Office (<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>).

- LECTURE RECORDINGS

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

Publication without permission from the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section.

### Grading

All graded assessments in this course are on Canvas.

You have only one opportunity to take each quiz and exam, so make certain you are well prepared before you start.

All quizzes and exams are closed book and closed note—no additional materials are allowed to assist you in completing exams or quizzes.

Quizzes and exams are limited in time, meaning that you really have to know the material.

Final course grades will follow the standard grading scale shown to the right:

No individual exceptions to this grading scale will be considered.

No grading curve will be applied unless the final class average is lower than 75% (C-). If the average final course grade is lower than 75%, an equal number of points will be added to each student’s grade until the average is 75%.

No extra credit assignments are anticipated. If extra credit is available, it will be announced to the entire class.

**A minimum grade of C is required for general education credit.**

Letter Grade	Range	
A	100%	to 92.5%
A-	< 92.5%	to 89.5%
B+	< 89.5%	to 86%
B	< 86%	to 82.5%
B-	< 82.5%	to 79.5%
C+	< 79.5%	to 76%
C	< 76%	to 72.5%
C-	< 72.5%	to 69.5%
D+	< 69.5%	to 66%
D	< 66%	to 62.5%
D-	< 62.5%	to 59.5%
E	< 59.5%	to 0%

- FINAL GRADE CALCULATION

	each	total
Exams (3 out of 4)	20%	60%
Quizzes (10 out of 11)	3%	30%
Writing assignment		5%
Research participation		5%

We will cover *roughly* 12 chapters worth of content over the course of the semester. Only select sections from some of the chapters will be assigned, and some weeks will cover material from multiple chapters—be sure to follow the reading schedule.

- EXAMS

Three non-cumulative exams and one cumulative final exam will be offered. If you take all three regular exams and are satisfied with your grade, you may skip the final exam. If you miss an exam, or if you do poorly on an exam, you can drop that exam and take the final exam to replace it. The best three exam scores are automatically counted.

Each exam will be composed of 40-45 multiple choice and/or fill-in-the-blank questions. Each exam must be completed within 50 minutes of starting it, after which time the exam will be automatically submitted, and any unanswered questions will be counted as incorrect. The first three exams will cover only the text and lecture material from the chapters that have been covered since the last exam (exams 2 and 3) or the first day of class (exam 1).

Exams will take place on Tuesdays (9/26, 10/31, and 12/5) throughout the semester. You do not need to complete the exam in the classroom (doing so is optional). You can *start* an exam anytime from 8:00 AM to 11:00 AM on test days, but once you start you only have 50 minutes.

The optional final exam will be made available on 12/11/2023 between 3:00 PM - 5:00 PM.

No course material will be covered on exam days.

In order to preserve the integrity of exam materials across classes and years, exam answers will NOT be provided on the class Canvas page. Feedback pertaining to missed questions or correct answers will be provided only during office hours for an individual student. During office hours meetings to discuss exams, a hardcopy (printed on paper) version of the exam will be available for review only (no pictures, no recordings). You will never see these exact questions again, so there is no need to memorize them anyway.

- QUIZZES

At the conclusion of each week (starting 8/31) except for exam weeks and Thanksgiving, there will be a 20-question quiz available on the Canvas course website. Quizzes will cover only material covered since the preceding quiz. Each quiz will be available for 3 days, beginning on Thursdays (within ~1 hour following class) until 11:59 PM that Saturday. Each quiz must be completed within 20 minutes of starting it, after which time the quiz will be automatically submitted, and any unanswered questions will be counted as incorrect. The best 10 quiz scores are automatically counted.

Quiz answers will be available on Canvas the following Monday (12:00 AM – 11:59 PM). Use the LockDown browser to view results.

There will be an additional, initial quiz covering the syllabus and 1<sup>st</sup> day of class information. The initial quiz serves both to test the LockDown browser and to ensure course policies are known. The initial quiz must be completed before taking the week one quiz. On this quiz only, you will be able to re-take the quiz multiple times until you score 100%.

- INDIVIDUAL WRITING ASSIGNMENT

The purpose of the writing assignment is to identify one neuroscience topic that is especially interesting/relevant/important to you, and then spend some extra time learning and thinking about this topic. The end product will be a brief paper (no more than 1.5 pages, plus a reference page) on a neuroscience topic of your choice, though the subject must be one covered in the book.

- Full assignment description on Canvas.

- SONA RESEARCH POOL PARTICIPATION

There is a Psychology Department requirement that all students enrolled in any 3000-level class participate in the SONA participation pool or complete an equivalent alternate assignment. Deadlines and number of hours for fulfilling this requirement will be posted on Canvas by the second week of class. Do NOT wait until the last minute to complete this requirement. The longer you wait the harder it will be to get all the credits you need!

- Full details on Canvas by week 2.

**Attendance & Participation:** Attendance will not be taken. However, material that is covered during the lecture will be included on the quizzes. Attending and taking notes is highly recommended.

**Missed exams or quizzes:** All requests to make up missed work must be due to documented extenuating circumstances and must be initiated through the DSO. See

<https://care.dso.ufl.edu/instructor-notifications/>

**Reading & Course Schedule**

August						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Notes:	
Sep 04	Labor Day
Oct 09	Columbus Day
Nov 11	Veterans Day
Nov 23	Thanksgiving Day
Dec 25	Christmas
Blue	Quiz Due (Sat)
Purple	Test (Tue)
Orange	Test 1 material
Yellow	Test 2 material
Green	Test 3 material
Violet	Final (optional)

November						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

January						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

- READINGS

When the first section of a chapter is assigned (e.g. 1.1, 2.1, etc.), also read the unnumbered opening page(s) of the chapter. Read any “Box” sections included within assigned reading sections (e.g. include Box 1.1 in the reading for chapter 1.1).

Week	Day	Date	Topic	Reading
0	Th	24-Aug	Syllabus, course intro.	
1	Tue	29-Aug	Introduction & history	Ch. 1
	Th	31-Aug	Evolution of the CNS	6.1, 6.3
2	Tue	5-Sep	The neuron	2.1
	Th	7-Sep	Neurophysiology	3.1-3.3
3	Tue	12-Sep	Neurotransmitters & drugs	4.1-4.2
	Th	14-Sep	Drugs & hormones	4.3,4.4,5.1
4	Tue	19-Sep	Neuroanatomy	2.2-2.4
	Th	21-Sep	Research methods	2.5, 3.4
5	Tue	26-Sep	Exam 1	
	Th	28-Sep	Sensory processing principles, touch, pain	Ch. 8
6	Tue	3-Oct	Hearing pt.1	9.1-9.2
	Th	5-Oct	Hearing pt.2	9.3-9.5
7	Tue	10-Oct	Vestibular & chemical perception	9.6-9.8
	Th	12-Oct	Vision pt.1	10.1-10.3
8	Tue	17-Oct	Vision pt.2	10.4-10.6
	Th	19-Oct	Vision pt.3	10.7, 7.3
9	Tue	24-Oct	Motor control & plasticity pt.1	11.1,11.2
	Th	26-Oct	Motor control & plasticity pt.2	11.3-11.6
10	Tue	31-Oct	Exam 2	
	Th	2-Nov	Sleep & biological rhythms pt.1	14.1-14.4
11	Tue	7-Nov	Sleep & biological rhythms pt.2	14.5, 14.6
	Th	9-Nov	Emotions & stress pt.1	15.1,15.2
12	Tue	14-Nov	Emotions & stress pt.2	15.3-15.5
	Th	16-Nov	Psychopathology pt.1	16.1,16.2
13	Tue	21-Nov	Psychopathology pt.2	16.3,16.4, 4.5
	Th	23-Nov	Thanksgiving break	No class
14	Tue	28-Nov	Learning & memory pt.1	17.1,17.2
	Th	30-Nov	Learning & memory pt.2	17.3-17.5, 7.5
15	Tue	5-Dec	Exam 3	
finals	Mon	11-Dec	Final Exam (optional)	