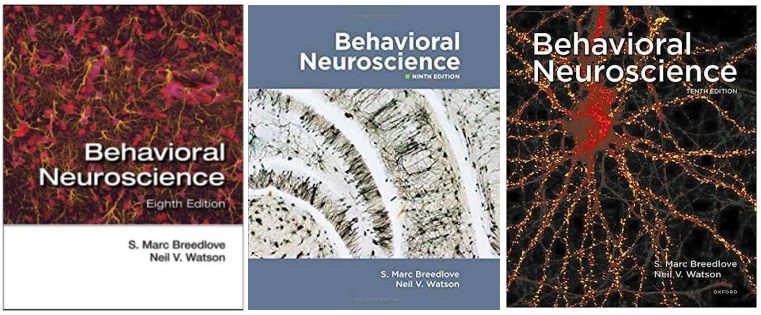
PSB 3340 Behavioral Neuroscience
Spring 2026

Section #16F9; Class #17304
class time: Tuesday period 3, 9:35 – 10:25 a.m.
Thursday period 3 - 4, 9:35 - 11:30 a.m.
room: Weimer Hall room, room1064
3 credits

In this course, we will use the most complex object in the known universe, to study the most complex object in the known universe. You are invited to come along and explore the human brain. I promise, it will be an exhilarating adventure.



Images of the covers of the 8th, 9th, and 10th editions of the Behavioral Neuroscience textbook, by Breedlove and Watson

Professor: Darragh P. Devine, Ph.D.
dpdevine@ufl.edu
phone: 352-273-2174
office hours: Tuesday 1:55 - 2:45 p.m. and Friday 10:40 - 11:30 a.m. (or by appointment)
Tuesday office hours are in-person in the Psychology Building, room PSY 337
Friday office hours are online at: Meeting ID: 974 1077 5241, Passcode: PSB3340

Teaching Assistant: To be announced

Required Text: *Behavioral Neuroscience*, 8th, 9th, or 10th ed. (2017, 2020, or 2023), by S. M. Breedlove and N. V. Watson (ISBN #_978-1605356426, ISBN# 978-1605359076, or ISBN# 978-0197616857)

This course complies with all UF academic policies. For information on those policies and for resources for students, please see https://go.ufl.edu/syllabuspolicies.

COURSE COMMUNICATIONS: If students have questions about the website, general course content, or other online materials, they should consult the syllabus and the supporting materials in the START HERE module on the Canvas website.

Dr. Devine and the Teaching Assistant will be available to answer questions during office hours, or through e-mail. Any e-mailed questions will be answered within approximately 24-48 hours (questions on the weekend may wait until the beginning of the following week).

BIOLOGICAL SCIENCES GENERAL EDUCATION SUBJECT AREA OBJECTIVES: This course confers General Education credit for Biological Sciences (B). 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 DESCRIPTION: The purpose of this course is to provide a broad background in the neural basis of behaviour. What is the brain made of? How is it put together? What do neurons do? How do neurons communicate? How are behaviours regulated? How can the brain malfunction? This is an in-depth introductory course, which is designed for students who have a real interest in learning about the brain and behavior. This includes students with interests in Psychology, Biology and other bio-medical sciences.

In this course, students will:
1. discover the cells and structures that make up the nervous system, learn the manner in which these elements interact with other body systems, and identify the roles they play in information processing in the brain.

2. develop knowledge about the mechanisms by which neurons communicate, and the changes that occur in neuronal activities during learning
3. learn the manner in which drugs, hormones, and other signals modify the functions of neurons
4. learn the fundamental neurobiological principles of sensory processing, emotional regulation, and motor function
5. learn the neurobiological mechanisms that drive normal motivations to eat, drink, sleep, and reproduce, as well as abnormal motivation to abuse drugs

Lectures and reading material will emphasize the cellular biology, anatomy, physiology, and development of the nervous system, and the neurobiology of sensation and motor function.

This course is required for students in the Behavioral and Cognitive Neuroscience track. It is also the pre-requisite for all 4000-level PSB courses (e.g. PSB4240, PSB4342, PSB4434, PSB4810, PSB4934). Students cannot take both PSB 3002 and PSB 3340.

SUBJECT AREA STUDENT LEARNING OUTCOMES:
Content: Students will identify, describe, and explain the basic concepts, theories and terminology of natural science and the scientific method; the major scientific discoveries and the impacts on society and the environment; and the relevant processes that govern biological and physical systems.

Critical Thinking: Students will formulate empirically-testable hypotheses derived from the study of physical processes or living things; apply logical reasoning skills effectively through scientific criticism and argument; and apply techniques of discovery and critical thinking effectively to solve scientific problems and to evaluate outcomes.

Communication: Students will communicate scientific knowledge, thoughts, and reasoning clearly and effectively.

PREREQUISITE KNOWLEDGE and SKILLS: Students who register for this course are required to have an introductory course in Biology (BSC2010 or equivalent). Fundamental knowledge in Introductory Psychology (e.g. PSY2012) is helpful, but not required. The course is self-contained - meaning that everything you need is contained within the course materials Accordingly, this course is appropriate for students who have a broad interest in Psychology and the biological basis of behaviour.

ATTENDANCE POLICY: Students are expected to attend all classes, and frankly, absence from classes will cause a student to miss information that will be tested on the quizzes and exams. Requirements for class attendance and make-up exams, assignments, and other work in the course are consistent with university policies.

GRADING: This course will have 9 short online quizzes (one per chapter), a research requirement, 3 in-person exams, and one final exam.

Each of the online quizzes will have 10 multiple-choice (MC) questions and will cover only the material in the chapter for which the quiz is assigned. The quizzes will count for a total of 36% of the final grade (3.6% per quiz, counting the best 9 quizzes; see quiz/exam policy, below).

The research assignment will count for 4% of your final grade (see “Research Participation” below, and detailed instructions posted in the “Start Here” module on the Canvas website).

Each in-person exam will have 40 MC questions. Each of these exams will cover only the text and lecture material from the chapters that have most recently been discussed in class (i.e. exam 1 will cover material from the beginning of the course up to the time of the exam; exam 2 will cover material assigned after exam 1; and exam 3 will cover material assigned after exam 2). The exams will count for a total of 60% of the final grade (20% per exam).
The final exam will have 40 MC questions, will be comprehensive, and can replace one missed exam or one exam on which you did poorly.

All grades will be rounded up to the next full integer when calculating the final grade. There will be no other grade adjustments.

QUIZ and EXAM POLICY: All quizzes are online, and can be found linked in the Canvas course website. Each online quiz is available while the material is being covered in class, until its due date and time. Then, it will disappear, along with the opportunity to get points for it. Each exam will only be available in class on the dates specified in this syllabus. The final exam will be comprehensive.

If you complete all quizzes, your best 9 out of 10 quizzes will count toward your final grade. If you miss a quiz, your best remaining 9 quizzes will count, and there is no additional penalty. If you miss any additional quizzes, you will be given a score of 0 (zero) on the additional missed quizzes, and those grades will be included in the calculation of your final grade.

The quizzes are not proctored, and you can use textbooks or other resources to find the answers to the questions, but each quiz is limited to 15 minutes. It will close at the end of 15 minutes.

It is advised that students complete all quizzes early, in order to avoid any potential problems with technology. If you encounter technical difficulty, you must contact the UF help desk (note that the phone and e-mail support is available after hours 24 hrs/day, except holidays – for further information see http://helpdesk.ufl.edu/hours-of-operations/).

The three exams and the final exam are in-person, in our regular classroom. You will not be allowed to use the textbook, notes, or any additional materials when you take the exams or the final exam. Three examinations must be completed, and the grades for all three exams will be included in the calculation of your final grade. 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. In this case the better exam score (regular exam or replacement) will count.

RESEARCH PARTICIPATION: The same research participation requirement as in the General Psychology course has been extended to all 3000-level Psychology courses. You will have the option to participate in research experiments through the SONA platform (Option 1) or to complete critical analysis papers (Option 2). Please see the Research Requirements link in the "Start here" module of the course website for more information, including details of procedures and critical deadlines for options 1 and 2.

The grading scheme is as follows:

Score (%)	Grade	Grade Points		Score (%)	Grade	Grade Points
93-100	A	4.00		73-76	C	2.00
90-92	A-	3.67		70-72	C-	1.67
87-89	B+	3.33		67-69	D+	1.33
83-86	B	3.00		63-66	D	1.00
80-82	B-	2.67		60-62	D-	0.67
77-79	C+	2.33		<60	E	0.00

A minimum grade of C is required for General Education (Biological Science) credit.

COURSE SCHEDULE:
For critical semester dates see http://www.registrar.ufl.edu

The chapters we will cover in this course will provide a solid foundation in Behavioural Neuroscience, which will prepare students for more advanced courses that are offered by faculty of the Behavioral and Cognitive Neuroscience program. Those more advanced courses include courses on the neurobiology of additional sensory systems (hearing, taste and smell), the neurobiology of drug addiction, the neurobiology of emotion, the neurobiology of stress, developmental neurobiology, the neurobiology of learning and memory, etc.

Approx. Dates	**Chapter and Topic**
Jan 13-15	Chapter 1: Biological Psychology: Scope and Outlook
	Quiz for chapter 1, due Sunday Jan 18 at 11:59 pm
Jan 20-27	Chapter 2: Functional Neuroanatomy: The Nervous System and Behavior
	Quiz for chapter 2, due Sunday Feb 1 at 11:59 pm
Jan 29-Feb 5	Chapter 3: Neurophysiology: Generation, Transmission, Integration of Neural Signals
	Quiz for chapter 3, due Sunday Feb 8 at 11:59 pm
Feb 9	*optional review session (10:40-11:30, Zoom Meeting ID: 974 1077 5241 passcode PSB3340)*
Feb 10	**Exam #1: Textbook Chapters 1 – 3, and all material covered in lectures**
Feb 12-19	Chapter 4: Neurotransmitters and Neuropharmacology
	Quiz for chapter 4, due Sunday Feb 22 at 11:59 pm
Feb 24-26	Chapter 5: Hormones and the Brain
	Quiz for chapter 5, due Sunday March 1 at 11:59 pm
March 3-5	Chapter 6: Evolution of the Brain and Behavior
	Quiz for chapter 6, due Sunday March 8 at 11:59 pm
March 9	*optional review session (10:40-11:30, Zoom Meeting ID: 974 1077 5241 passcode PSB3340)*
March 10	**Exam #2: Textbook Chapters 4-6, and all material covered in lectures**
March 12	Chapter 7: Lifespan Development of the Brain and Behavior (to be continued)
March 17-19	*Spring Break - no classes*
March 24-26	Chapter 7: Lifespan Development of the Brain and Behavior (continued)
	Quiz for chapter 7, due Sunday March 29 at 11:59 pm
March 31	Chapter 8: General Principals of Sensory Processing
	Quiz for chapter 8, due Sunday April 5 at 11:59 pm
	We will skip chapter 9
April 2-9	Chapter 10: Vision: From Eye to Brain
	Quiz for chapter 10, due Sunday April 12 at 11:59 pm
April 14-16	Chapter 11: Motor Control and Plasticity
	Quiz for chapter 11, due Sunday April 19 at 11:59 pm
April 20	*optional review session (10:40-11:30, Zoom Meeting ID: 974 1077 5241 passcode PSB3340)*
April 21	**Exam #3: Chapters 6, 8, 10, and 11, and all material covered in lectures**
April 27	*optional review session (10:40-11:30, Zoom Meeting ID: 974 1077 5241 passcode PSB3340)*
April 27 (3:00-5:00)	**Final Exam: Textbook Chapters 1-8, 10, 11, and all material covered in lectures**

COURSE EVALUATIONS: Students are expected to provide professional and respectful feedback on the quality of this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, or in their Canvas course menu under GatorEvals.