

PSB 4810
"Neurobiology of Learning and Memory"
Summer A 2024

Section #DV45, class number: 20150
 3 credits

Professor: Dr. Darragh P. Devine
 email dpdevine@ufl.edu
 office: Psychology Building room 337
 phone: 352-273-2174

Office hours: Office hours will be online. I am trying a little experiment this summer semester to try to make office hours more available by offering them at different times each week:

online office hours: meeting ID = 943 4402 6204; password = PSB4810

week 1. Monday 5/13 (11:00 am - 12:00 pm)	and	Thursday 5/16 (5:30 pm - 6:30 pm)
week 2. Monday 5/20 (12:30 pm - 1:30 pm)	and	Wednesday 5/22 (11:00 am - 12:00 pm)
week 3. Tuesday 5/28 (2:00 pm - 3:00 pm)	and	Friday 5/31 (12:30 pm - 1:30 pm)
week 4. Monday 6/3 (2:00 pm - 3:00 pm)	and	Wednesday 6/5 (5:00 pm - 6:00 pm)
week 5. Tuesday 6/11 (5:30 pm - 6:30 pm)	and	Thursday 6/13 (5:30 pm - 6:30 pm)
week 6. Monday 6/17 (11:00 am - 12:00 pm)	and	Friday 6/21 (5:00 pm - 6:00 pm)

Required Text: Jerry W. Rudy *The Neurobiology of Learning and Memory 2nd edition*, ISBN # 978-1-60535-230-5. **[We will not use the third edition]**

GENERAL INFORMATION: Human psychological function may be construed as the sum of stored experience interacting with current sensation and awareness. Learning and memory - the encoding, storage, and retrieval of that experience impact upon our motivations and emotions, and influence our current perceptions and behavioural responses to our environment. The purpose of this course is to provide a broad background in the neural basis of learning and memory. How are development and learning related? How do they differ? How is plasticity encoded in neurons? What are the cellular and molecular mechanisms of plasticity? Where and how are memories distributed and stored in the brain? How are they retrieved? We will examine these issues from a variety of perspectives - historical, developmental, genetic, pharmacological, electrophysiological.

GRADING: The course will have three tests. Each will cover the reading and lecture material that was most recently discussed in class, and each test will contain a combination of multiple choice, fill-in-the-blank, and short essay questions (the short essay questions will require a BRIEF answer - maximum 300 words). Each test will count for 33 1/3% of your final grade.

The grading scheme is as follows:

A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	E <60
A- 90-92	B 83-86	C 73-76	D 63-66	
	B- 80-82	C- 70-72	D- 60-62	

A grade of C- or lower will not be a qualifying grade for major, minor, Gen Ed, Gordon Rule or College Basic Distribution credit.

All lectures will be available online only, and can be watched asynchronously during the time that they are available. The lectures for chapters 1-4, leading up to exam #1 will be available starting May 13. The lectures for chapters 5-11, leading up to exam #2 will be available starting May 27. The lectures for chapters 12-19 leading up to exam #3 will be available starting June 10.

Students are strongly advised to read each chapter before watching the corresponding lecture, and to keep up with readings and lectures according to the following schedule. It will be difficult to catch up if you fall behind in this 6-week summer course. A recommended schedule is posted on the following page (blue font). All exams must be completed by their respective due dates.

Dates	Chapter	Topic
May 13-14	Ch 01	Introduction: Fundamental Concepts and Historical Foundations
<i>Mon May 13</i>		<i>Watch Introduction lecture and Ch 01a lecture</i>
<i>Tues May 14</i>		<i>Watch Ch 01b lecture</i>
May 15-17	Ch 02	Mechanisms of Synaptic Plasticity: Introduction
<i>Wed May 15</i>		<i>Watch Ch 02a lecture</i>
<i>Thurs May 16</i>		<i>Watch Ch 02b lecture</i>
<i>Fri May 17</i>		<i>Watch Ch 02c lecture</i>
May 20-21	Ch 03	Modifying Synapses: Central Concepts
<i>Mon May 20</i>		<i>Watch Ch 03a lecture</i>
<i>Tues May 21</i>		<i>Watch Ch 03b lecture</i>
May 22-23	Ch 04	Generating and Stabilizing the Trace: Post-Translational Processes
<i>Wed May 22</i>		<i>Watch Ch 04a lecture</i>
<i>Thurs May 23</i>		<i>Watch Ch 04b lecture</i>
May 24	Exam #1:	Chapters 1-4 (available online May 19, due May 26 11:59 p.m.)
May 27-28	Ch 05	Consolidating Synaptic Changes: Translation and Transcription
<i>Mon May 27</i>		<i>Watch Ch 05a lecture</i>
<i>Tues May 28</i>		<i>Watch Ch 05b lecture</i>
May 29	Ch 06	Consolidating Synaptic Changes: Specific Mechanisms
<i>Wed May 29</i>		<i>Watch Ch 06 lecture</i>
May 30	Ch 07	Maintaining the Consolidated Trace
<i>Thurs May 30</i>		<i>Watch Ch 07 lecture</i>
May 31	Ch 08	Toward a Synthesis
<i>Fri May 31</i>		<i>Watch Ch 08 lecture</i>
June 3	Ch 09	Making Memories: Conceptual Issues and Methods
<i>Mon June 3</i>		<i>Watch Ch 09 lecture</i>
June 4	Ch 10	Memory Formation: Early Stages
<i>Tues June 4</i>		<i>Watch Ch 10 lecture</i>
June 5-6	Ch 11	Memory Consolidation
<i>Wed June 5</i>		<i>Watch Ch 11a lecture</i>
<i>Thurs June 6</i>		<i>Watch Ch 11b lecture</i>
June 7	Exam #2:	chapters 5-11 (available online June 2, due June 9 11:59 p.m.)
June 10	Ch 12	Memory Maintenance and Forgetting
<i>Mon June 10</i>		<i>Watch Ch 12 lecture</i>
June 11	Ch 13	Memory Modulation Systems
<i>Tues June 11</i>		<i>Watch Ch 13 lecture</i>
June 12	Ch 14	The Fate of Retrieved Memories
<i>Wed June 12</i>		<i>Watch Ch 14a lecture and Ch14b lecture</i>
June 13	Ch 15	Memory Systems and the Hippocampus
<i>Thurs June 13</i>		<i>Watch Ch 15 lecture</i>
June 14	Ch 16	The Hippocampus Index and Episodic Memory
<i>Fri June 14</i>		<i>Watch Ch 16 lecture</i>
June 17	Ch 17	The MTH System: Episodic Memory, Semantic Memory, and Ribot's Law
<i>Mon June 17</i>		<i>Watch Ch 17 lecture</i>
June 18	Ch 18	Actions, Habits, and the Cortico-Striatal System
<i>Tues June 18</i>		<i>Watch Ch 18 lecture</i>
June 19		celebrating Juneteenth, no lecture
June 20	Ch 19	Learning about Danger: The Neurobiology of Fear Memories
<i>Thurs June 20</i>		<i>Watch Ch 19 lecture</i>
June 21	Exam #3:	chapters 12-19 (available online June 16, due June 22 11:59 p.m.)

Additional Support for Students with Disabilities: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. [Click here to get started with the Disability Resource Center](#). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Technical Difficulties: If students encounter any technical difficulties with the course website, assigned materials, or examinations, it is their responsibility to reach out to Dr. Devine at dpdevine@ufl.edu and the UF helpdesk at <https://it.ufl.edu/helpdesk/> or call 352-392-4357. It is the student's responsibility to resolve issues in a timely manner. Extensions for test deadlines will not be granted for unresolved technical matters.

Attendance: Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. [Click here to read the university attendance policies](#).

Academic Honesty Guidelines: The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XI of the Student Conduct Code. The conduct set forth hereinafter constitutes a violation of the Academic Honesty Guidelines ([University of Florida Rule 6C1-4.017](#)).

Cheating. The improper taking or tendering of any information or material which shall be used to determine academic credit. Taking of information includes, but is not limited to, copying graded homework assignments from another student; working together with another individual(s) on a take-home test or homework when not specifically permitted by the teacher; looking or attempting to look at another student's paper during an examination; looking or attempting to look at text or notes during an examination when not permitted. The tendering of information includes, but is not limited to, giving of your work to another student to be used or copied; giving someone answers to exam questions either when the exam is being given or after taking an exam; giving or selling a term paper or other written materials to another student; sharing information on a graded assignment.

Plagiarism. The attempt to represent the work of another as the product of one's own thought, whether the work is published or unpublished, or simply the work of a fellow student. Plagiarism includes, but is not limited to, quoting oral or written materials without citation on an exam, term paper, homework, or other written materials or oral presentations for an academic requirement; submitting a paper which was purchased from a term paper service as your own work; submitting anyone else's paper as your own work.

Publication of Course Materials: Publication without permission of 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. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

UF's Student Honor Code is described at <https://policy.ufl.edu/regulation/4-040/>

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. 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, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Campus Resources:

Health and Wellness Resources

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: [Visit the Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or [visit the Student Health Care Center website](#).

University Police Department: [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road,

Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website](#).

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the [GatorWell website](#) or call 352-273-4450.

Academic Resources

E-learning technical support: Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.