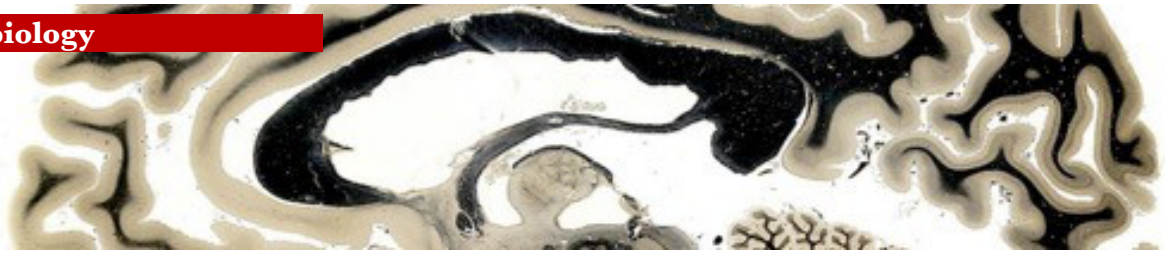
Neurobiology

2021



Syllabus

BIOL/CBIO 3800

Instructors

Dr. James Lauderdale

Office: Room 250B, Paul D. Coverdell Center
Office phone: (706) 542 7433
e-mail: jdlauder@uga.edu

Dr. Nadja Zeltner
Office: Room 2212, Center for Molecular Medicine
Office phone: (706) 542 2650
e-mail: nadja.zeltner@uga.edu

Teaching Assistant

Ms. Sneha KM Mohan, doctoral student

Office: Room 256, Paul D. Coverdell Center
Lab phone: (706) 542-0112
e-mail: snehakm@uga.edu

Office hours: ***by appointment***.

Email correspondence: Please include "BIOL 3800" or "CBIO 3800" in the subject line along with the topic so that we can find class-related e-mails.
Two examples: *CBIO 3800 Question* or *BIOL 3800 Honors option*.

Meeting Times, Location & Important Dates

First day of class: Wednesday, January 13, 2021 **Last day of class:** Monday, May 3, 2021

Class days: Monday, Wednesday, Friday **Class time:** 9:10 A.M.–10:00 A.M.

Location for class: on zoom

1st block - Lauderdale:
https://zoom.us/j/97813446285?pwd=TTJLcXpCNVpQdzYwWlhTdEs3U1lpZz09
Meeting ID: 978 1344 6285
Passcode: 319558

2nd block – Zeltner:
https://zoom.us/j/97506441460?pwd=dnk4cGMyd2xCSXI5UG1CWjUvakh6UT09
Meeting ID: 975 0644 1460
Passcode: 409704

3rd block - Lauderdale:
https://zoom.us/j/97813446285?pwd=TTJLcXpCNVpQdzYwWlhTdEs3U1lpZz09
Meeting ID: 978 1344 6285
Passcode: 319558

4th block - Zeltner:
https://zoom.us/j/97532136147?pwd=NkcwSlNUcnpnRUdiZkNNVEZDblB3dz09
Meeting ID: 975 3213 6147
Passcode: 393212

Exam Dates

Exam 1: Friday, February 12 from 9.10-10.00 A.M., online

Exam 2: Monday, March 8 from 9.10-10.00 A.M., online

Exam 3: Monday, April 12 from 9.10-10.00 A.M., online

Exam 4: Monday, May 10 from 9.10-10.00 A.M., online

Cumulative Quizzes: Due Friday, May 7, 11.59 P.M., online

General Information

Credit Hours: 4.0. Students who are successful in this course typically spend 8 to 12 hours outside of class per week studying the material covered in lectures

Prerequisites: Biology 1103 and 1104, or 1107 and 1108, or equivalent are prerequisites for this course. It is assumed that you have fulfilled these requirements.

Online teaching: Due to the size of this class, all instruction will be given online in an synchronous manner (live lectures on zoom) and quizzes and exams will also occur online. We aim to record each lecture and post the recordings on eLC for your convenience. However, we strongly encourage attendance in each class. Furthermore, we encourage that students keep their video on, this will help the instructors to get to know students better in an already difficult online setting and thus will improve your and our experience.

Mental Health and Wellness Resources: If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit https://sco.uga.edu. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services. UGA has several resources for a student seeking mental health services (https://www.uhs.uga.edu/bewelluga/bewelluga) or crisis support (https://www.uhs.uga.edu/info/emergencies). If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA (https://www.uhs.uga.edu/bewelluga/bewelluga) for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center. Additional resources can be accessed through the UGA App.

Coronavirus Information for Students:
Face Coverings:
As a reminder, the University of Georgia—along with all University System of Georgia (USG) institutions—requires all faculty, staff, students, and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Anyone not using a face covering when required will be asked to wear one or must leave the area. Reasonable accommodations may be made for those who are unable to wear a face covering for documented health

reasons. Students seeking an accommodation related to face coverings should contact Disability Services at https://drc.uga.edu/.

DawgCheck:
Please perform a quick symptom check each weekday on DawgCheck—on the UGA app or website—whether you feel sick or not. It will help health providers monitor the health situation on campus: https://dawgcheck.uga.edu/

What do I do if I have symptoms?
Students showing symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies.

What do I do if I test positive?
Any student with a positive COVID-19 test is **required** to report the test in DawgCheck and should self-isolate immediately. Students should not attend classes in-person until the isolation period is completed. Once you report the positive test through DawgCheck, UGA Student Care and Outreach will follow up with you.

What do I do if I am notified that I have been exposed?
Revised Guidelines for COVID-19 Quarantine Period
Effective Jan. 4, 2021, students who learn they have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for **10 days** (consistent with updated Department of Public Health (DPH) and Centers for Disease Control and Prevention (CDC) guidelines). Those quarantining for 10 days must have been symptom-free throughout the monitoring period. Please correspond with your instructor via email, with a cc: to Student Care & Outreach at sco@uga.edu, to coordinate continuing your coursework while self-quarantined.
We strongly encourage students to voluntarily take a COVID-19 test within 48 hours of the end of the 10-day quarantine period (test to be administered between days 8 and 10). Students may obtain these tests at Legion Field (https://clia.vetview.vet.uga.edu/) or at the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in the University Health Center without an appointment. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies
If the test is negative, the individual may return to campus, but MUST continue to closely monitor for any new COVID-19 symptoms through 14 days. DawgCheck is the best method for monitoring these symptoms. If new symptoms occur, the individual must not come to campus and must seek further testing/evaluation.
If the test is positive at the end of the 10-day period, the individual must begin a 10-day isolation period from the date of the test.

How do I participate in surveillance testing if I have NO symptoms?
We strongly encourage you to take advantage of the expanded surveillance testing that is being offered from **January 4 – 22: up to 1,500 free tests per day at Legion Field and pop-up locations.** Testing at Legion Field can be scheduled at https://clia.vetview.vet.uga.edu/. Walk-up appointments can usually be accommodated at Legion Field, and pop-up saliva testing does not require pre-registration. For planning purposes, precise sites and schedules for the pop-up clinics are published on the UHC's website and its social media as they are secured: https://www.uhs.uga.edu/healthtopics/covid-surveillance-testing.

Course Materials

Textbook
Neuroscience, edition 6. Purves, Augustine, Fitzpatrick, Hall, LaMantia, McNamara & LE White (eds.)
Publisher: Sinauer Associates, Inc.; ISBN: 978-1605353807.

Note: the 5th edition is also acceptable, but there are differences in content.

eLC page

CBIO3800 Neurobiology Spring 2021 (https://uga.view.usg.edu/d2l/home/2234848)

Lectures and supplemental information will be posted to eLC.

Course description

This course serves as an introduction to the structural organization, basic physiology, and neurochemistry of the vertebrate nervous system. The basic progression of the course is from the level of the individual units of the nervous system - nerve cells - up to their integration into the nervous system as a whole.

Course goals

The major goal of this course is to offer you the essentials required to continue your training in the neurosciences, and for you to use these skills to understand and critically examine the primary literature in this new and fascinating field.

Assessment

Grading

Grades will be assigned on a scale of A-F using the plus/minus grading system. *Grades will be determined from cumulative point totals for exams and online quizzes.* A total of 100 points are possible for this class: 80 points from exams and 20 points from quizzes.

An additional 5 bonus points (5% of final grade) from two extra quizzes are available that count as extra credit.

Grade assignments:	A	93.0-100%
	A-	90.0-92.9
	B+	87.0-89.9
	B	83.0-86.9
	B-	80.0-82.9
	C+	77.0-79.9
	C	70.0-76.9
	D	60.0-69.9
	F	59.9 and below

Block 1- Lauderdale:			
~1/5th Exam 1	12 lectures	24 pts (~2pts/lecture)	2 quizzes
Block 2- Zeltner:			
~1/5th Exam 2	8 lectures	16 pts (~2pts/lecture)	2 quizzes
Block 1- Lauderdale:			
~1/5th Exam 3	13 lectures	24 pts (~2pts/lecture)	2 quizzes + 1
Block 1- Zeltner:			
~1/5th Exam 4	9 lectures	16 pts (~2pts/lecture)	2 quizzes + 1
Overall:			
~1/5th quizzes	8 quizzes (2/block)	20 pts (~2.5pts/quiz)	
		100 pts	

Examinations
There will be four exams, one after each block. All 4 exams will be 50 min long and given online. Exams account for 80% of the grade, quizzes account for 20% of the grade. The dates of the exams are listed on the first page of the syllabus. Please mark your calendars appropriately.

If for any reason you are unable to take a test at the scheduled time, arrangements must be made in advance and IN WRITING. In case of an unexpected illness, you will be expected to notify us by email before the test and to present a note from a physician or the health center.

Extra Credit: Up to an additional 5 bonus points (5% of grade) are available that count as extra credit.

There will be one extra credit quiz associated with Dr. Lauderdale's second block and one associated with Dr. Zeltner's second block. (These are the "+1" above). These extra-credit quizzes may include material covered in the first half of the course. These quizzes are optional. To be considered for extra credit, you must have completed the 2 extra quizzes online before the deadline Friday, May 7, 11.59 P.M.

Honors Option

In accordance with the requirements of the Honors Program at The University of Georgia, students who wish to earn Honors credit for BIOL/CBIO 3800, Neurobiology, are expected to complete additional academic work, as well as the normal course requirements for this class. To receive Honors credit in this class, students will be asked to prepare a research proposal that focuses on a current topic in neurobiology. This topic can be picked from a list of topics provided by the instructors, or students may suggest topics if they have specific interests, but instructor approval is required.

Students will research their chosen topic, develop a hypothesis that addresses one aspect of this topic, and then propose at least two experiments designed to test their hypothesis. The proposal will have the following parts: (1) an Abstract briefly stating the problem, what is known about the problem, the hypothesis that is being tested, and the specific aims of the research proposal (what experiments are you going to use to test your hypothesis and what do you hope to accomplish with your experiments?); (2) an Introduction that will address the background leading to the development of the hypothesis and the significance of the problem; (3) the Research Design and Methods (what experiments are you going to

use to test your hypothesis and why); and (4) a discussion about all possible outcomes from the experiments: the student is expected to predict both the results that would be consistent, or inconsistent with the hypothesis, or other novel findings and their implications.

The proposal should be approximately 7 to 10 pages in length (not including citations), single spaced, with one-inch margins, and use a font size of 12 points. You may want to include figures or drawings to help clarify your presentation. Additional information and guidelines pertaining to the format of the proposal will be made available to you by your instructors. A draft of the abstract is due no later than March 1st, and the final research proposal is due no later than the last day of class.

Sections in Research Proposal

Abstract/ Specific Aims (1 page or less)
A brief statement of the problem, what is known about the problem that lead to the development of the hypothesis to be tested, and a brief statement of how you are going to test the hypothesis. The hypothesis must be clearly indicated. The specific aims should be statements of what you want to test.

Introduction (~2-3 pages)
State the hypothesis to be tested at the top of the page
Background and significance (What is known about this problem; why is it important? Be sure to discuss previous experiments that lead to the development of your hypothesis!)

Specific Aims of the proposal (What do you hope to test in more detail) and Experimental Design (~4-6 pages)
Describe what the experiment is designed to test.
Give a brief description of the methods to be used. Use only accepted protocols; give citations. Include the appropriate controls that would help you interpret your experiments! Describe outcome(s) that would support your hypothesis and state why. Describe outcomes that would not support your hypothesis and state why.

Literature Cited (~ 1-3 pages) Complete citations.

Email correspondence:
Please direct all emails pertaining to BIOL/CBIO 3800 Honors to the TA, Ms. Carly Duffy (carly.duffy25@uga.edu). Include "BIOL 3800" or "CBIO 3800" in the subject line along with the topic so that we can find class-related emails. (Two examples: "CBIO 3800 Question" or "BIOL 3800")

Honors Option Major Assignment Dates:
All Assignments due by 5pm of posted date or before.

1) Meeting arranged with TA for paper topic approval (10 pts): By Monday, February 1st, by appointment
2) Specific Aims (10 pts): Monday, February 15th
3) Introduction (15 pts): Monday, March 1st
4) Detailed Specific Aims/Experimental Design (15 pts): Monday, March 15th
5) Rough Draft of full proposal (40 pts): Monday, March 29th
6) Second Scheduled meeting for TA feedback of proposal rough draft (10 pts): By Monday, April 12th
7) Final Paper Due (100 pts): Monday, April 26th at 5:00pm

To receive the Honors, you must achieve a grade of "B" or higher,