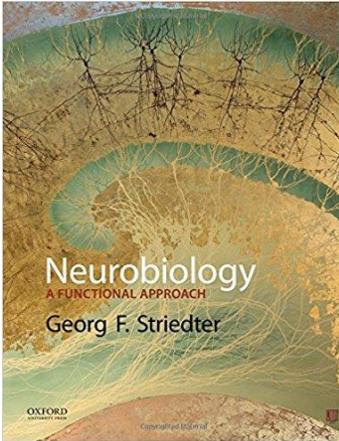


Syllabus: PSY 561 Cognitive and Behavioral Neuroscience I, Spring 2020



Tu Th 10:00-11:30, Psych 316 B

Professor: Turhan Canli, Ph.D.

Office: Psychology B 214

Office hours: Mo 10-1

e-mail: turhan.canli@stonybrook.edu

COURSE DESCRIPTION:

Welcome! This is the first part of a 2-part series in Cognitive and Behavioral Neuroscience, based on Striedter's textbook on Neurobiology. In this first part, we will cover the foundations of Integrative Neuroscience, starting with the molecular basis of the resting and action potentials, and covering the organization, development, and protection of the brain, sensory processing and muscle functions. Wherever appropriate, I will add material that is relevant to clinical or other functional implications of the learned material. We will also discuss the primary literature, with students assigned presentations of selected papers

Required Reading

Striedter, Georg F. (2016). *Neurobiology - A Functional Approach*. Oxford University Press.

COURSE LEARNING OBJECTIVES:

1. Gaining an understanding of the foundations of neurobiology.
2. Developing critical and scientific thinking skills through discussion of research methods and the primary literature.
3. Creative Problem-solving through essay exam questions.

COURSE REQUIREMENTS:

GRADING:

ACTIVE PARTICIPATION

I organized this course around three pedagogical approaches, each roughly mapped onto one class period, and each requiring your active participation in different ways.

Chapter review

This will be a discussion of the textbook chapter.

NIH seminar

The NIH holds an incredible library of recorded talks by the leading scientists in their respective fields. These are full-lengths seminar presentations. I will use this library to get you socialized to attending and participating in research seminars, which will become a critical part of your

scientific professional skillset. I will assign background reading prior to class. ***We will discuss the strengths and weaknesses of the talk, including clarity of the presentation, the quality of the science, and outstanding questions.***

Journal Club

In "Journal Club", you will lead a 15-20 minute discussion of a recent research paper from the published literature that is related to the chapter and that you selected. You are NOT expected to lecture on that paper to a passive audience. Instead, you will assign that paper to the class at least one week in advance and everyone is expected to have read that paper and be able to contribute to class discussion.

Teaching Club

In "Teaching Club", you will prepare 15-20 minutes of material from that chapter as you would if you had to teach an undergrad class. You can pick any part of the chapter, and teach it to the rest of the class in any way you like. I hope you take this as an opportunity to be creative and pedagogically thoughtful.

Review Paper (semester-long)

You will produce a 4-page (not including references) review paper on any topic covered during the semester. You will meet with me individually before spring break to discuss your topic. You will then submit a draft by 5 PM on Tuesday 5/5. I will then provide you feedback by 5 PM on Thursday 5/7. Your final version of the paper is due on Thursday 5/14 by 5 pm.

Grading

20% Journal Club participation
20% Teaching Club performance
60% Review Paper

Assignment of Letter Grades, based on the summed score of Journal Club, Teaching Club, and Review Paper.

> 92 A
90-92 A-
87-89 B+
83-86 B
80-82 B-
77-79 C+
73-76 C
70-72 C-
67-69 D+
63-66 D
< 63 F

CLASS PROTOCOL:

Class interruptions

Stony Brook University expects students to maintain standards of personal integrity that are in harmony with the educational goals of the institution; to observe national, state, and local laws and University regulations; and to respect the rights, privileges, and property of other people.

CLASS RESOURCES:

Blackboard

Course documents and important announcements will be posted on the Blackboard site

for the class. Lecture slides will be available on-line before class, if possible. These are not meant as a substitute for class attendance but to assist students who do come to class to follow along with lectures. I recommend that you print the slides in a “notes” format with 3 slides per page and add your own notes during lecture. Due to time constraints, student questions, and last minute changes, material discussed in class may deviate somewhat from the posted slides. You can access class information on-line at: <http://blackboard.sunysb.edu>. If you have used Blackboard in the past, your login information (Username and Password) has not changed. If you have never used Stony Brook's Blackboard system, your initial password is your SOLAR ID# and your username is the same as your Stony Brook username, which is generally your first initial and the first 7 letters of your last name. For help or more information see: <http://www.sinc.sunysb.edu/helpdesk/docs/blackboard/bbstudent.php>
For problems logging in, go to the helpdesk in the Main Library SINC Site or the Union SINC Site, you can also call: 631-632-9602 or e-mail: helpme@ic.sunysb.edu

Writing Center

What They Do: Assist students with writing essays and class responses

Location: Humanities Building, Room 2009

Website: http://www.stonybrook.edu/commcms/writrhet/writing_center/writing.html

Career Center

Career Center 632-6810 Melville Library W0550

<http://www.career.sunysb.edu>

Career planning plays an integral role in the academic planning process for all students. From providing guidance on how to write a résumé to helping you narrow down your career choice, to finding internships, the Career Center's services are here to help you succeed.

Pre-Health and Pre-Law Advising Services

What They Do: Advising student regarding Pre-Health and Pre-Law Advising Services

Location: Melville Library, Room E3310

Pre-Health Website: <http://studentaffairs.stonybrook.edu/prehealth/>

Pre-Law Website: <http://studentaffairs.stonybrook.edu/prelaw/>

Others

<http://stonybrook.edu/aadvising/tut.html>

DISABILITY SUPPORT SERVICES (DSS):

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: <http://www.stonybrook.edu/ehs/fire/disabilities>.

ACADEMIC INTEGRITY:

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity,

including categories of academic dishonesty, please refer to the academic judiciary website at <http://www.stonybrook.edu/uaa/academicjudiciary/>

CRITICAL INCIDENT MANAGEMENT:

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.

RESPONSIBILITIES IN THE CLASSROOM (AS PER UNIVERSITY POLICY):

Students are expected to:

- attend class regularly unless other arrangements are made;
- arrive for class on time and leave the classroom only at the end of class;
- engage in class discussions and activities when appropriate;
- exhibit classroom behavior that is not disruptive of the learning environment;
- secure in a closed container (and not, for example, wear on a belt or around the neck) and turn off (and not, for example, simply set to vibration mode) electronic communication devices, including cellular phones, beepers, speakers, and headphones during an examination.

COURSE RESPONSIBILITIES (AS PER UNIVERSITY POLICY):

Students are expected to:

- observe the requirements for the course and consult with the instructor if prerequisites are lacking;
- obtain and understand the course syllabus;
- keep up with the coursework and take all scheduled examinations;
- address any conflicts in syllabus and exam scheduling with the instructor as soon as possible;
- review all graded material and seek help if necessary;
- as soon as possible notify the instructor of any disabilities that might interfere with completion of course work;
- fairly and thoughtfully complete the course evaluation form.

ATHLETES:

Athletes who will need accommodation for exams occurring while they are on the road or who may miss "Check Your Progress" questions due to absences from class, please also see me during the first 2 weeks of the semester with documentation of their status as athletes and their playing schedule.

FOREIGN SPEAKERS:

If you are not a native English speaker, you must obtain my permission to use a paper dictionary during exams. We reserve the right to examine your dictionary during the exam. No electronic dictionaries will be allowed under any circumstances.

COURSE EVALUATIONS

Stony Brook University values student feedback in maintaining the high quality education it provides and is committed to the course evaluation process, which includes a mid-semester assessment as well as an end-of-the-semester assessment, giving students a chance to provide information and feedback to an instructor which allows for development and improvement of courses. Please click the following link to access the course evaluation system: <http://stonybrook.campuslabs.com/courseeval/>

COURSE SCHEDULE

<u>Day</u>	<u>Date</u>	<u>Topic</u>	<u>Reading</u>
Tu	1/28	No class	
Th	1/30	Organizational Meeting	
Tu	2/4	Computing with Neurons	Ch. 2
Th	2/6	NIH talk	
Tu	2/11	Journal Club	
Th	2/13	Teaching Club	
Tu	2/18	Neuronal Plasticity	Ch. 3
Th	2/20	NIH talk	
Tu	2/25	Journal Club	
Th	2/27	Teaching Club	
Tu	3/3	Developing a Nervous System	Ch. 4
Th	3/5	NIH talk	
Tu	3/10	Journal Club	
Th	3/12	Individual Meetings for Review paper topics	
Tu	3/17	Spring Break	
Th	3/19	Spring Break	
Tu	3/24	Protecting and Maintaining the Adult Nervous System	Ch. 5
Th	3/26	NIH talk	
Tu	3/31	Journal Club	
Th	4/2	Teaching Club	
Tu	4/7	Sensors I: Remote Sensing I and II	Ch. 6/7
Th	4/9	NIH talk	
Tu	4/14	Journal Club	
Th	4/16	Teaching Club	
Tu	4/21	Using Muscles and Glands 1	Ch. 8
Th	4/23	NIH talk	
Tu	4/28	Journal Club	
Th	4/30	Teaching Club	
Tu	5/5	Review paper draft due	
Th	5/7	Individual Meetings with Feedback on Review Paper	
Th	5/14	Final Submission for Review Paper	

Withdrawal. The last day to withdraw from the course without a “W” being recorded on your transcript is **February 7**. Last day to drop a course (with a W appearing on your transcript instead of a grade) is **March 27**. **I RESERVE THE RIGHT TO ALTER ANY ASPECT OF THIS SYLLABUS AT MY DISCRETION.**