PSY 350 INTRODUCTION TO NEUROSCIENCE

(Fall, 2020)

Course Description: This course is an introduction to the mammalian nervous system in which we will be focusing on the structure and the function of the human brain. As it will cover the basics of neuroscience it does not require any background or knowledge in the field. Topics include the function of the basic units of the nervous system as well as the survey of the basic facts, empirical evidence, theories and methods of study in neuroscience.

Instructor: Dr. Nihan Alp

TA: İlker Duymaz (duymaz@sabanciuniv.edu) -I will be available online during the office hours. Since the whole semester will be online this year, there might be increased demands in participating office hours. In order to use limited time in maximum efficiency: please book a time slot and send your questions to the TA a day prior to the office hour.

Office and online class: https://sabanciuniv.zoom.us/j/98063260681

Meeting ID: 980 6326 0681

Passcode: IntNeRo350

Synchronous Online Class Hours: Monday 12:40-13:30

Office Hours: Wednesday, 15:40

https://sabanciuniv.zoom.us/j/93873641000

Meeting ID: 938 7364 1000
Passcode: OFFHour

Email: nihanalp@sabanciuniv.edu

Structure of the course: Each week there will be an hour online discussion class in which I expect you to watch previously uploaded videos before coming to the virtual classroom. If everything in the video recordings is clear, and there is no question at all (!), during this online discussion hour, I will further discuss important parts. But, you are expected to watch the videos and send your questions to the TA prior to synchronous online discussion hour. You can use the Google Sheets link provided on the SUCourse page to submit your questions.

Office Hour and email policies: Asking questions is a key concept in science and questions you have are generally questions that others will have, therefore don't be shy and please share them in the discussion class. You can e-mail me your questions or just click the link and password. As everything will be online this semester it is important for you to use office hours. Please email your questions to the TA at least one day before, so that we can use the time efficiently.

What do I expect from you in the class?

Expectations of students: I expect you to:

- keep up with the material covered every week
- watch uploaded video recordings prior to discussion course
- participate actively and courteously discussion sessions in the virtual class
- Be there on time. Ask questions, don't be shy. Think critically & discuss.
- abide by the standards of academic honesty
- ask questions and seek help (from instructors and TAs) when something is not clear.
- send an e-mail about your questions before joining the office hour to use the time efficiently
- enjoy learning about the mammalian nervous system!

Announcements:

- Check the course web pages regularly for announcements, information about exams and review sessions, grades, and changes to the schedule. You are responsible for finding out about this information.

Structure of the course: This is an online lecture-based course. Each week, the students are expected to watch lectures and participate discussion hours. There is no one coursebook. There will be occasional readings on some topics from chapters of the science books and some journal articles. The course is organized into 3 modules. First two modules will have a separate examination at the end. The 3rd exam will be cumulative.

WEEK	TOPIC	READING ASSIGNMENTS
1	Introduction	*CHAPTER 1* *Neuroscience -Exploring the Brain 3rd Edition* https://www.visionlearning.com/en/library/Inside-Science/58/Santiago-Ram%c3%b3n-y-Cajal-and-Camillo-Golgi/233
2	The Anatomy of the Nervous System	*Chapter 2* *Neuroscience -Exploring the Brain 3rd Edition*
3	Neural Conduction and Synaptic Transmission	*Chapter 3&4* *Neuroscience -Exploring the Brain 3rd Edition*
4	Structure and Function of the Brain/ **Pick a group and Topic**	*Chapter 7* *Neuroscience -Exploring the Brain 3rd Edition*
5	Measurement Methods in Neuroscience fMRI, EEG, TMS, patch clamp etc.	What we can do and what we cannot do with fMRI (Logothetis, 2008) The steady-state visual evoked potential in vision research: A review (Norcia et. al. 2015)
6	**Exam 1**	

7	The Eye	*Chapter 9* *Neuroscience -Exploring the Brain 3rd Edition*
8	The Central Visual System	*Chapter 10* *Neuroscience -Exploring the Brain 3rd Edition*
9	Do mirror Neurons Exist?	Rizzolatti et al., Nature Reviews Neuroscience 2, 661-670 (2001) Umiltà et al.: I know what you are doing http://psych.colorado.edu/~kimlab/Rizzolatti.annurev.neuro.2004.pdf Calvo-Merino et al., Cerebral Cortex (2005) Chong et al., (2008) Lingnaua, Gesiericha, & Caramazza, (2009)
10	Sleep and Biological Rythms/ **Submit first draft: Friday 5 pm**	Chapter 8 Foundations of Behavioral Neuroscience, Ninth Edition. Neil R. Carlson.
11	Learning and Memory	Chapter 12 Foundations of Behavioral Neuroscience, Ninth Edition. Neil R. Carlson.
12	Attention	*CHAPTER 21* *Neuroscience -Exploring the Brain 3rd Edition*
13	**Exam2**	
14	Disorders/ **Submit term paper: Friday 12 am**	Chapter 14 Foundations of Behavioral Neuroscience, Ninth Edition. Neil R. Carlson.

Exams and Grades: There will be three exams, which may include **multiple-choice**, **short answer**, and an **essay question.** These will cover the material presented in lecture and in the assigned readings.

When I say "short answer", I really mean it. The correct answer is **short**. Short answer questions can be answered in a couple of sentences. There will be only one makeup exam **which will be given in the final week**. If you don't have any medical report from a doctor, you are responsible for attending the exam. No other excuses will be accepted.

Exams:

- **There will be only one make-up exam which will be given after the final exam and include all chapters covered during the semester.**

- If you think your exam has been graded incorrectly, **submit a written explanation** at the following class. I will double check the grading and get back to you.

Exam1 %22.5

Exam2 %22.5

Exam3 %35 (cumulative)

Term paper %20: This is a group project. You will work in groups (no less than 3 no more than 5). You can find more information here: https://campus.albion.edu/wjwilson/files/2015/09/neuropapermanF15.pdf

Due: Week 14 -Friday 12 am

Timeline:

1. **Week 4 -Friday 5 pm:** Make a group, choose a topic and inform me, in writing, of your choice. Provide at least two references that you expect to use in writing the paper. This is worth 2 points. No late submissions will be accepted. If you did not form group and choose your topic by the deadline, you will lose 2 points. In case you want to change your topic later on:
   - in week 5: you will lose 0.5 points
   - in week 6: you will lose 1 point
   - in week 7: you will lose all 2 points
2. **Week 10 -Friday 5 pm:** Send a draft of the paper (pdf-format) for comment to the TA. This is worth **10 points.**
   - Late submission: -4
   - Proper format (header, abstract, introduction, discussion etc.): 2
   - Content: 3
   - Grammar: 2
   - The purpose and focus are clear and consistent: 3
3. **Week 14 -Friday 12 am**: Final version of the paper must be handed in (uploaded in SUCourse) no later than this. This is worth **10 points.** The system will be closed, and late assignments will not be accepted. There will be no exceptions to this policy.

Grade Scale: This is an example grade scale I generally follow.

A	89-100	A-	83-88

B+	78-82	B	73-77	B-	68-72		
C+	64-67	C	60-63	C-	56-59		
D+	53-55	D	50-52	D	50-52	F	0-50

Research Points: Students can optionally serve as participants in research that is run by Sabancı University researchers. By participating in research, you can get extra credits. For this course, you will be able to earn up to 6 research points (RP) which is equal to three hours of research participation. These 6 RPs will be converted to 2 points added to your 3rd exam grade. More information on the available research projects will be provided during the semester.

You will be able to sign up for the experiments and get your research participation credits though the online Sona system at http://sabanciuniv.sona-systems.com

Please, carefully read the Guide for Students: Sabancı University Experiment Credits System (Sona).

The alternative assignment will be given to those who are not willing to participate in any research. The students who choose alternative assignment may need to do different assignments based on the principle investigator (PI) of the course. You can find each study's PI on the Sona webpage for that study.

Plagiarism policy: I encourage students to work and study together whenever possible. But if you cheat on any assignment, you will receive a grade of **F** for the course.

The act of plagiarism will be considered as a fraud and will not be tolerated. Please avoid academic dishonesty at all cost.

Note: The course syllabus provides a general plan for the course. We are committed to following the syllabus but there is no guarantee that we will. Altering the syllabus may also mean changing the nature or timing of exams/assignments. By continuing in the course after reading the syllabus, you are indicating that you accept the terms of the syllabus.