

NSC 3361 Introduction to Neuroscience Spring 2020 Syllabus

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Office: JO3.204

Office Hours: *Monday and Tuesday 11:30-12:30 and other times by agreement*

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Textbook

Recommended: *Mind's Machine*, by Neil V. Watson and S. Marc Breedlove, any edition. Many used paperback copies should be available via the bookstore and web. FYI: nearly all test questions come from lecture; use the book with this in mind.

Weekly lecture reviews are a resource for you. These apply to that week's lectures - student TAs will discuss them and answer your questions. The review session immediately after each test will be a test review.

Individual review: You are welcome and indeed encouraged to meet with me or one of the student TAs during office hours to go over difficult concepts and discuss learning strategies. You must help us to help you. The day before the test is too late; make it a regular weekly thing.

Course Content

This course has a strong 'clinical' orientation, as I am a pediatric neurologist. Every lecture will try to include examples from real patients (children and adults) with real neurological disorders. There is a **lot of new vocabulary** we need to learn to talk about the brain and behavior. The course begins with the study of nerve cells: their structure, the propagation of nerve impulses and transfer of information between nerve cells, the effects of drugs (legal and otherwise) on this process. We also examine the overall structure of the nervous system and its development. We will see how sensory systems such as vision, hearing, and motor systems control behavior. Finally, we will study sex, hunger and thirst, language, attention, sleep, mental illness, emotion, learning and memory. In one semester! Whew! Come to class. Wear your seatbelt. Really.

Elearning

Class lecture slides are posted on elearning. No portion of these slides may be sold, retransmitted, reposted, duplicated or otherwise used without the express written approval of the author. Announcements will be made from time to time. In event of classroom emergencies, such as lecture cancellations for March Madness, nice golfing weather, or World Cup matches, I will send emails to all in the class.

Turning Point App

This course uses a classroom polling software Turning Point, on your phone. Use it for extra credit (see below).

Assessment

Exams: There will be three exams during the course, plus a cumulative final exam. Each exam will be worth 33.3% of your final grade and will cover the material from the third of the course preceding the exam. Thus, you may drop your lowest exam, even the final if desired. Material covered on the exams will be taken from class lectures, as well as any additional material that I may provide. Exams will consist of multiple-choice questions. Missed exams may be made up by taking the final. You will need your NetID from your Comet card and your luckiest pencil for each test. We will supply the scantron sheet.

Extra-credit: Clicker grading; You receive 2 points for every correct clicker question answer, and 1 point for every incorrect answer. For the final clicker grade computation, I will average the top three students' total clicker points and set that as 100%. So, if the top three students earned 130, 129 and 128 points, 100% is the average of these: 129. If you scored 112 total points, then your grade for the clickers is $112/129$: 87%, and you receive $5 \times .87 = 4.5$ points added to your final course grade.

Final Grades: A final grade will be submitted: A+: 98-100%, A: 93-97.9%, A-: 90-92.9%, B+: 87-89.9%, B: 83-86.9%, B-: 80-82.9%, C+: 74-79.9%, C: 68-73.9%, C-: 60-67.9%, D: 50-59.9%, F < 50.

Class attendance: Recall the wisdom of Woody Allen: "Ninety percent of life is just showing up". Your class participation affects your grade.

Teaching Assistants

For routine questions outside of class, please email the student TAs or graduate TA. They are good sources for reviews of tests, and other appropriate academic help. The student TAs are also the best sources for questions about course content, how to use elearning, the lecture slides, inside information about the tests, etc. The student TAs especially are to be consulted, because they have taken the approx. same tests as you will be given. But I am available as well, either during office hours or by apt. We are your resource: use us!

NSC 3361 Spring 2020 Lecture Schedule

	Lecture Topic	Class	Reading MM
Week 1	Introduction	1	
	Neuroanatomy – Just the basics	2	Chapter 2
Week 2	Membrane Properties of Neurons; The Action Potential	3	Chapter 3
	Synaptic Transmission (Snap, Crackle, Pop)	4	Chapter 3
Week 3	“	5	Chapter 3
	Neuropharmacology (‘Drugs, Man’)	6	Chapter 4
Week 4	“	7	”
	Brain Development (From Little Acorns ...)	8	
Week 5	“ (... Big Oaks Grow)	9	
2/13	Exam 1	10	
Week 6	Sex (and the Single Brain)	11	Chapter 8
	Hunger, Thirst, Homeostasis (Eat, Drink, and be Mellow)	12	Chapter 9
Week 7	Emotions, Stress and Aggression	13	Chapter 11
	Pain and Touch (‘This Might Hurt a Little Bit’)	14	Chapter 5
Week 8	“	15	Chapter 5
	Audition and Language (Listen Up!)	16	Chapter 6
Week 9	“	17	Chapter 15
	“	18	Chapter 15
Week 10	Visual System (Look Here!)	19	Chapter 7
	“	20	Chapter 7
3/31	Week 11 Exam 2	21	
	Motor Control (Why Tiger is so Still Much ...	22	Chapter 5
Week 12	...Better at Golf than You and I Are)	23	Chapter 5
	Rhythms of the Brain (Sleep)	24	Chapter 10
Week 13	Psychopathology (Xtreme Brains)	25	Chapter 12
	“	26	Chapter 12
Week 14	Learning and Memory (Don’t forget)	27	Chapter 15
	“	28	Chapter 15
Week 15	“	29	Chapter 15
4/30	Exam 3	30	
TBA	Final Exam		

Syllabus may be changed at any time during the course, as needed.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus. Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.