Fall 9-1-2021

NEUR 491.01: Neuropharmacology

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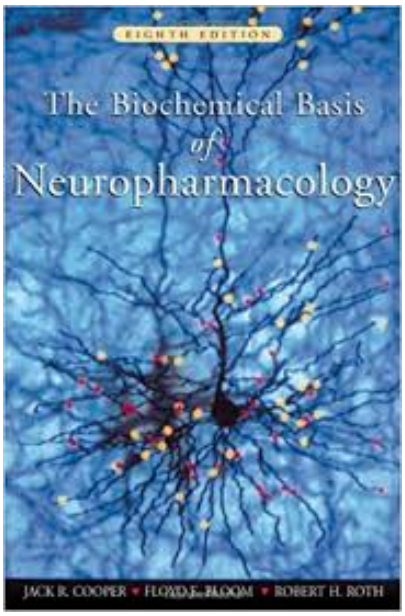
Fall 2021

Neuropharmacology
NEUR 491



Instructors:
Dr. Rich Bridges
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Office: 409? Health Sciences
Office Hours:

Dr. Katie Holick
e-mail: katie.holick@umt.edu
Office: 385C Skaggs Building
Office Hours: By appt, live or virtual

Required Materials:
Textbook: Cooper, Bloom and Roth. The Biochemical Basis of Neuropharmacology. 8th Edition.

Course Description: This course will provide students a better understanding of the chemical signaling systems in the brain, how these systems change in disease, and how drugs modulate their activity. The course should be of particular interest to Neuroscience, Pre-Med, Psychology, Chemistry, Biochemistry and Human Biology majors.

Learning Outcomes: Through lectures and discussion, the course is designed to ensure that you will learn general principles applicable to many questions that will arise about the human brain and neuropharmacology. Following this course students will:

1. Understand the synthesis, release, diffusion, uptake, and target of each of the endogenous neurotransmitters found in the human brain.
2. Comprehend the mechanisms of action and receptor targets for drugs commonly used in neuropharmacology experiments and clinical practice.
3. Apply neuropharmacological principles to predict treatments for neurological and psychiatric diseases.

Classroom Expectations:

1. Bring your interest and curiosity.
2. We will ask you to participate. There are no wrong answers, just opportunities to fine tune our understanding.
3. Feel free to ask questions at any time.
4. Be respectful of others' thoughts, feelings, and beliefs even if they differ from your own.

Course Policies:

1. Masks will be required for in-person instruction. If you have a medical condition that does not allow you to wear a mask, please contact the instructor for an alternative seating arrangement.
2. When emailing an instructor, please :CC both instructors. This just aids in communication transparency and coverage.

3. If you must miss an assignment or exam please contact the instructor administering the assignment as soon as you are aware of a conflict or have begun to feel ill.

Course Assignments

1. Exams - Three semester exams and one final exam will be given Test formats will include multiple-choice and short answer questions plus occasional short essays. There may be some demonstrations or podcasts integrated into classes, and perhaps brief review quizzes. If you miss a semester exam, this will be graded as a zero. The final examination is cumulative and must be completed to receive a final grade. Failure to take the final exam will result in a failing grade. *All students are expected to take all exams when they are scheduled*. Students are expected to notify the instructor prior to missing an exam. Students are responsible for any changes in dates of scheduled exams, quizzes, or assignments or any other administrative announcement made during lectures. Write the word "electrified" on your first exam for two bonus points.
2. Quizzes - Each week an online quiz will be given for the Chapters covered within that week via the Moodle website. The purpose of these quizzes is to assess your understanding of the material presented that week in class. These quizzes will be due by midnight Friday of each week.
3. Final Project -

Your performance will be evaluated as follows:	%	#	Points/Item	Total Points Awarded
Quizzes	16.5%	11	15	165
Semester Exams	45%	3	150	450
Final Presentation/Assignment	18.5%	1	185	185
Comprehensive Final Exam	20%	1	200	200
Total	100%			1000

Disability Considerations:

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you have a disability that adversely affects your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or 406.243.2243. The instructors will work with you and Disability Services to provide an appropriate modification.

Course Schedule

(Dates and topics below are subject to change)

Week	Date	Topic	Chapter(s)	Instructor

1	Aug 31 Sept 2	Introduction	1	Holick/Bridges
2	Sept 7 Sept 9	Cellular Foundations of the Neuropharmacology	2	Holick
3	Sept 14 Sept 16	Molecular Foundations of Neuropharmacology	3	
4	Sept 21 Sept 24	Receptors	4	Bridges
5	Sept 28 ept 30	Modulation of Synaptic Transmission	5	Holick
6	Oct 5 Oct 7	**Exam 1** Acetylcholine	7	Holick
7	Oct 12 Oct 14	Amino Acid Transmitters	5	Bridges
8	Oct 21 Oct 23	Norepinephrine and Epinephrine	8	
9	Oct 28 Oct 30	Dopamine	9	

10	Nov 2 Nov 4	Serotonin, Histamine, and Adenosine	10	
11	Nov 9 Nov 11	**Exam 2** **No Class Veterans Daty**		Holick/Bridges
12	Nov 16 Nov 18	Neuroactive Peptides	11	
13	Nov 23 Nov 25	Cellular Mechanism of Learning and Memory **A Day of Feast**	12	Holick
14	Nov 20 Dec 2	Treating Neurological and Psychiatric Diseases	13	Bridges
15	Dec 7 Dec 9	Review Session/Presentations **Exam 3**		
Finals Week	TBA	COMPREHENSIVE FINAL		