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Spring 2-1-2017

### PSYX 250N.01: Fundamentals of Biological Psychology

Nathan Insel

*The University Of Montana*, [nathan.insel@umontana.edu](mailto:nathan.insel@umontana.edu)

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# PSYX 250N-01 – Fundamentals of Biological Psychology

Spring 2017

## Course Time and Location

Tuesday & Thursday 12:30am - 1:50pm  
Room location: Natural Science 307

## Instructor Information

Instructor: Nathan Insel, Ph.D.  
Email: [nathan.insel@umontana.edu](mailto:nathan.insel@umontana.edu)  
Office: Skaggs Rm 362  
Office hours: Mon. & Tues. 2:15-3:30 and by appointment

## Course Description

This class offers an introduction to psychology from the perspective of biological **mechanisms**. Where many psychology classes focus on “What do humans and other animals do?” we will be asking “How is it done?” This includes basic questions like “How do we see, smell, hear?” and “How do we move?” It also includes more complex questions like “How do we remember?” and “How do we become motivated or feel emotion?” These are tricky topics, because although we know many details about the biology of animals and their nervous systems, we often don’t know which details are important for generating (or “computing”) mind and behavior. This class will be an **introduction to the basics** of how biological parts interact with one-another to make neurons, neuron circuits, and behavior do what they do. While you may leave this class with more questions than answers, my goal is that you will also leave with basic knowledge about brain biology and a basic understanding of the principles of its operation.

## Reading Material

First (and foremost): read, understand, and think about your lecture notes. This also means you should take good notes during lecture and ask questions about concepts that are unclear. This also means you should attend every class, or if you have to miss a class, to get notes from another student.

Textbook: Kalat, *Biological Psychology*, 11<sup>th</sup> edition (Available as an Ebook).

## Course Evaluation

In this course, you will be evaluated by four tests, each worth 25% of your final grade. Each test/exam will be based on lecture material, the last test will take place during the final exam period and be cumulative. All tests will contain multiple-choice and a handful of short-answer questions; the final may additionally include longer-answers.

## Course Policies

### Disability Modifications

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

### Academic Misconduct

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the [Student Conduct Code](#).

### Drop Date

Policies on dropping can be found on the [Registrar's webpage](#). Beginning the 46<sup>th</sup> instructional day of the semester through the last day of instruction before scheduled examinations, students must petition to drop.

### Make-up Tests

If you have to miss a scheduled test, please contact me before the test to discuss the situation. *There will be **NO** makeup tests*, and if there are compelling circumstances beyond your control that require you to miss a test, the weighting of that test will be redistributed to the other tests.

### Course Outline

***Please note that this outline is subject to change depending on the needs of the class. Any changes to the syllabus will be announced in class beforehand. The assignment and test dates are fixed.***

Date	Topics	Readings
Jan 24 <sup>th</sup>	Mechanisms & levels of analysis	Kalat 1.1 (p1-7)
Jan 26 <sup>th</sup>	Nervous system overview	Kalat 4.1 (p86-108)
Jan 31 <sup>st</sup>	From molecules to cells	Kalat 2.1/2.2 (p27-49)
Feb 2 <sup>nd</sup>	Neuron communication	Kalat 3.1/3.2 (p51-70)
Feb 7 <sup>th</sup>	Neuron circuits & neuromodulation	TBA (possible handout)
Feb 9 <sup>th</sup>	Neuromodulation & drugs	Kalat 3.3 (p71-83)
Feb 14 <sup>th</sup>	<b>Test 1</b>	
Feb 16 <sup>th</sup>	Vision part 1	Kalat 6.1/6.2 (p153-167)
Feb 21 <sup>st</sup>	Vision part 2	Kalat 6.3 (p182-189)
Feb 23 <sup>rd</sup>	Touch & sound	Kalat 7.1/7.2 (p194-213)
Feb 28 <sup>th</sup>	Vestibular, taste, smell	Kalat 7.3 (p215-229)

<b>Date</b>	<b>Topics</b>	<b>Readings</b>
Mar 2 <sup>nd</sup>	Movement	Kalat 8.1 (p231-239)
Mar 7 <sup>th</sup>	Reward	TBA
Mar 9 <sup>th</sup>	Decisions	Kalat 8.2 (p240-253)
Mar 14 <sup>th</sup>	<b>Test 2</b>	
March 16 <sup>th</sup>	Visceral system	Kalat p356
Mar 21 <sup>st</sup> & 23 <sup>rd</sup>	<b>SPRING BREAK—NO CLASS</b>	
Mar 28 <sup>th</sup>	Emotion	Kalat 12.1/12.2 (p355-379)
Mar 30 <sup>th</sup>	Memory	Kalat 13.1/13.2 (p389-419)
Apr 4 <sup>th</sup>	Stress	Kalat 12.3 (p381-387)
Apr 6 <sup>th</sup>	Sleep	Kalat 9.1-9.3 (p265-295)
Apr 11 <sup>th</sup>	<b>Test 3</b>	
Apr 13 <sup>th</sup>	Eating & Drinking	Kalat 10.1-10.3 (297-325)
Apr 25 <sup>th</sup>	Social behaviors 1	TBA
Apr 27 <sup>th</sup>	Social behaviors 2	Kalat 11.1/11.2 (p327-351), Kalat 14.2 (432-444)
May 2 <sup>nd</sup>	Nervous system disorders 1	--
May 4 <sup>th</sup>	Nervous system disorders 2	Kalat 15.1/15.2 (p459-485)
TBD (May 9 <sup>th</sup> -12 <sup>th</sup> )	<b>Final exam*</b>	

**\*Final exam:** Exam period is May 9<sup>th</sup>-12<sup>th</sup>. It is the student's responsibility to be available for the exam period.