

BIBB 109/ PSYC109  
 Introduction to Brain and Behavior  
 Summer I 2019  
 Lecture MTWR 11:30-1:30  
 Leidy Lab 109  
 Laboratory F Leidy Lab 104  
 911 11:30-1:30  
 912 1:30-3:30

**Instructor:** Judith McLean, Ph.D.

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Office Hours: By Appointment

**Lab Coordinator:** Dr. Michael Kaplan [mkap@sas.upenn.edu](mailto:mkap@sas.upenn.edu)

**TA:** Jessica Burke [jeburke@sas.upenn.edu](mailto:jeburke@sas.upenn.edu)

| Date | Lecture  | Readings |
|------|--|----------|
| May  | T28 Introduction                                 | 1        |
|      | W29 Cell Biology/Membrane Potential              | 2,3      |
|      | R30 Action Potential                             | 4        |
|      | F31 <b>LAB 1</b>                                 |          |
|      | M3 Synaptic Transmission                         | 5        |
|      | T4 Synaptic Transmission                         | 6        |
|      | W5 Organization of the Nervous System            | 7        |
|      | R6 Principles of Sensory Systems/Chemical Senses | 8        |
| June | F1 <b>Recitation</b>                             |          |
|      | M10 Vision                                       | 9        |
|      | T11 Vision                                       | 10       |
|      | W12 Auditory/ Vestibular                         | 11       |
|      | R13 <b>EXAM 1 through vision</b>                 |          |
|      | F14 <b>LAB 2</b>                                 |          |
|      | M17 Somatosensory                                | 12       |
|      | T18 Spinal Cord                                  | 13       |
|      | W19 Movement                                     | 14       |
|      | R20 Eye Movements and Attention                  | 21       |
|      | F21 <b>LAB 3</b>                                 |          |
|      | M24 Hypothalamus/Motivation                      | 15,16    |
|      | T25 Brain Rhythms and Sleep                      | 19       |
|      | W26 Mental Illness                               | 22       |
|      | R27 Synaptic Plasticity                          | 23       |

F28    **LAB 4 and QUIZ**

|      |    |                     |       |
|------|----|---------------------|-------|
| July | M1 | Learning and Memory | 24,25 |
|      | T2 | Review              |       |
|      | W3 | <b>Final Exam</b>   |       |

**Synopsis:**

Introduction to the structure and function of the vertebrate nervous system. We begin with the cellular basis of neuronal activities, then discuss the physiological bases of sensory systems, motor control, motivated behaviors, and higher mental processes. This course is intended for students interested in the neurobiology of behavior, ranging from animal behaviors to clinical disorders.

**Textbook:**

Bear, Connors, Paradiso. Neuroscience: Exploring the Brain (4<sup>th</sup> ed). Philadelphia, PA. : Wolters Kluwer, 2016

**Labs:**

Room A3 Solomon Psychology Laboratories

Lab 1: computer simulation

Labs 2 and 3: Sheep brain dissection.

Lab 4 Systems Lab

**Canvas** <https://courseweb.library.upenn.edu/>

Lecture slides and announcements will be posted on this site.

**Grading:**

The final grade will be based on 2 non-cumulative short answer exams each worth 35%, one lab quiz worth 10%, participation/ attendance (10%), and four weekly quizzes 10%. The University recognizes religious holidays. No makeup exams will be given unless the student presents a *bona fide* excuse.

|               |     |
|---------------|-----|
| Exams         | 70% |
| Lab           | 10% |
| Participation | 10% |
| Quizzes       | 10% |