

# Physiological Psychology

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Dr. Mark West

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**Office:** Busch Psychology Bldg. Room 225

**Office hours:** Mondays 2 to 4 pm via **Zoom** (link)

**Course Website:** Sakai

**The course is online, asynchronous**

## REQUIRED TEXTBOOK

**Physiology of Behavior** by Neil Carlson, 12th edition. It's the current edition, in use for 3 years, so used versions should be available and inexpensive.

ISBN for the Revel version of the text: 0134320824

**Revel (optional)** is the textbook website, a study guide which includes some videos, teaching aids, practice test questions, and more. No students' activities of any kind on the Revel website will ever be monitored, so feel free to use the tests to reveal any weaknesses in your knowledge that you can strengthen before my exams.

## LEARNING GOALS

To understand:

- how a neuron generates an action potential
- that most drug effects on behavior involve altered neurotransmission at synapses
- how the major parts of the nervous system are connected (neural circuits)  
“Law of Specific Nerve Energies”
- how a few of the major systems work
- how neural circuits change as a function of learning

## GRADING & POLICIES:

Exam scores will be the **only** determinants of your grade; no credit will be given for extra work.

**Homework:**

- Watch all lectures (narrated power points) and study them
- Study the assigned readings (Learning Objectives) in the textbook
- Use Revel's teaching aids, such as pre-test and post-test questions – focus on what you missed (results are NOT “sent to Instructor”).

**Exams:**

- Six exams (open-book, open-notes) of equal weight will comprise multiple choice and diagram questions.
- The final exam will NOT be cumulative.
- Your final grade will be determined from the average of your **numeric** scores on the six exams.
- If the distribution of these averages for this class is lower than a standard distribution, final grades will be curved.

- Each exam will last ONE HOUR but you will have a 24-hour period, 5pm to 5pm the next day, in which to take it, on the Sakai “Tests and Quizzes” tab.
- Once you start an exam, you will have one hour to finish it. Therefore, if you wait until the next day, you must start at least an hour before 5pm in order to have a full hour to take the exam.
- Exam results will be posted after the close of the 24-hour period.

Missing an exam will not be excused, except in an emergency (you must provide written documentation, such as a physician's note); and must notify the professor on or before the exam date. *(Make-up exams are difficult.)*

The best ways to succeed are to:

- read each assignment before watching the corresponding lecture
- take notes during my lectures. It may be helpful to print out the power point files (under Resources at Sakai) first and then take notes on your printout
- ask questions during office hours
- study with classmates
- communicate with fellow students in our Sakai Chat Room

I present material so you can understand it. My exam questions test your understanding of concepts, such as relationships seen in graphs that have been presented in my lectures. I do not ask questions involving rote memorization of definitions, dates, scientists’ names, etc.

It is important to keep on schedule with reading assignments because of the amount of material, and because some chapters are more difficult than others. This will be an in-depth, difficult course aimed at the highest undergraduate level.

The exams are not easy. But you can make them seem easy if you seriously study and do all of the above.

\*\*\*Academic Integrity: Ethical conduct is the obligation of all students and faculty. Any involvement with cheating will be reported to the Dean's Office and can result in expulsion from the University.\*\*\*

### SCHEDULE OF ASSIGNED READINGS:

Topic of Class Meeting	Assigned Reading: Learning Objectives (LO)	Important Figures in Carlson Text (most appear in .ppt lectures in class)
Introduction	Ch 1 Read only paragraphs related to my Ch. 1 power point slides.	Figs. in Ch. 1 1.3
The Neuron	Ch. 2 LO 2.1, 2.2, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 2.16, 2.17	Figs. in Ch. 2 2.3, 2.4, 2.6, 2.9, 2.15, 2.16, 2.17, 2.18, 2.20, 2.21, 2.22, 2.24, 2.26, 2.27, 2.28, 2.29, 2.30, 2.31
Synaptic Transmission	(Ch. 2 cont.)	
<b><i>EXAM 1</i></b> <b><i>Tuesday, June 2</i></b>		

Neurophysiology	(Ch. 2 cont.)	
Neuroanatomy <a href="#">Click here for Handout #1 (required list of structures to identify in Exam 2)</a>	Ch. 3 LO 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13 (ignore neuroanatomical terms that are not mentioned in lecture)	Figs in Ch. 3 3.13, 3.14c, 3.15, 3.27, 3.29 All figures in power point file
<b>EXAM 2</b> <b>Monday, June 8</b>		
Psychopharmacology <a href="#">Click here for Handout #2 (required) and use Tables 4.2, 4.3, 4.5, and 4.6 to help you fill out the handout</a>	Ch. 4 LO: 4.1, 4.2, 4.3, 4.4, 4.6 through 4.13 Ch. 16 LO: 16.1, 16.2, 16.5, “Atypical antipsychotics” in LO 16.6	Figs in Ch. 4 4.3, 4.4, 4.5, 4.7, 4.8, 4.9, 4.10, 4.12, 4.14, 4.16, 4.17, 4.18, 4.19, Table 4.1 Figs in Ch. 16 16.1, 16.2, 16.3, 16.4, 16.7, 16.8, 16.9, 16.13
Psychopharmacology (cont.)	<a href="#">YouTube film: The Case of the Frozen Addict</a>  Exam 3 will include questions on film.	
Visual System	Ch. 6 LO: 6.1, 6.4, 6.8, 6.21	Figs in Ch. 6 6.6, 6.8, 6.10, 6.16, 6.17, 6.35,
<b>EXAM 3</b> <b>Monday, June 15</b>		
Auditory, Somatosensory, Vestibular Systems	Ch. 7 LO: 7.1, 7.4, 7.5, 7.6, 7.13, 7.16	Figs in Ch. 7 7.1, 7.2, 7.5, 7.7, 7.8, 7.22, 7.23, Table 2
Motor System	Ch. 8 LO: 8.4, 8.7	Figs in Ch. 8 8.6, 8.8, 8.13, 8.14 Fig. 2.12 (Ch. 2)
<b>EXAM 4</b> <b>Monday, June 22</b>		
Emotion	Ch. 11 LO: 11.1, 11.2, 11.3 Ch. 3: re-read “Hypothalamus” at end of LO 3.7	Figs in Ch. 11 Fig. 11.2, 11.3, 11.4, 11.5 re-visit Fig 3.22 in Ch. 3
Stress disorders Psychoneuroimmunology	Ch. 17 LO: 17.1, 17.2, 17.3, 17.4 (no need to memorize immune cell types), 17.5, 17.7	Figs in Ch. 17 17.1, 17.2, 17.3, 17.4, 17.10, 17.12
<b>EXAM 5</b> <b>Monday, June 29</b>		
Learning & Memory	Ch. 13 LO: 13.1, 13.3, 13.4, 13.9, Amnesia, 13.11, 13.12, 13.15, LTP, 13.16, 13.17, 13.18	Figs in Ch. 13 13.2, 13.3, 13.5, 13.7, 13.8, 13.11, 13.12, 13.13, 13.20, 13.26, 13.27, 13.28, 13.29, 13.30, 13.31, 13.32, 13.33, 13.34 Table 13.1, 13.2
Drug Abuse	Ch. 18 LO: (Pg. 590, 591), 18.1, 18.2, 18.7	Figs in Ch. 18 18.1, 18.2, 18.4, 18.3, 18.15, 18.16, 18.22 Table 18.1, 18.3

<b><i>EXAM 6</i></b> <b><i>Friday July 3</i></b>		
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