

Psyc 111: Introduction to Biological Psychology

Fall 2017 Syllabus

Part 1: Course Information

Instructor Information

Instructor: Dr. Sharon Furtak, Assistant Professor of Psychology

- M.S. & Ph.D. in Behavioral Neuroscience from Yale University
- B.A. in Psychology from the University of Massachusetts, Amherst
- My research interests focus on the neurobiology of emotional learning & memory.

Class Time & Location: Tuesdays & Thursdays 3:00-4:15pm in AMD150

Office Location: AMD 357A

Office Hours: Tuesdays 4:15-6:15pm & Thursdays 2-3pm

Office Telephone: 916-278-6666

E-mail: furtak@csus.edu, *I only respond to emails sent from your Sacramento State email address in order to verify student identity.*

Course Description

Introductory overview of the psychobiological aspects of behavior. Emphasis is on the central and autonomic nervous systems and the endocrine system. Topics include physiological factors involved in sensation, perception, motivation, learning, emotion, social behavior, and maladaptive behavior. Prerequisite: PSYC 2; PSYC 8, PSYC 101 recommended. Graded: Graded Student. Units: 3.0.

Textbook & Course Materials

Required Text: Available at Bookstore.

1. "Foundations of Behavioral Neuroscience", 9th edition, by Neal Carlson. price: \$72.10-\$206.00 depending on e-version, paperback or rented. This does not include MyPsychLab access. Only purchase 9th edition and do not purchase International version.
2. *Before you attend class* print out/download the syllabus and handouts from Canvas and read any class announcements, which will be emailed only to your CSUS email. Material will be posted and updated regularly throughout the semester. **NO RECORDING OR PHOTOGRAPHY IN CLASS EXCEPT WITH THE EXPLICIT PERMISSION OF DR. FURTAK.**

Course Requirements

- Internet connection (DSL, LAN, or cable connection desirable)
- Access to Canvas
- Access to Adobe Reader & Microsoft Office (available in campus computer lab)
- Access to QuickTime or alternative video player software for mpg files.

Course Structure

This course consists of two class sessions per week on Tuesdays and Thursdays from 3pm to 4:15pm. Class time will consist of lectures and exam reviews. In addition, it will be required that you take a weekly timed quiz **between 5pm on Thursdays and 11:59pm on Saturdays**. You will have 15 minutes to complete quizzes.

Canvas Access

This course will have readings, quizzes and materials posted online through a course management system named Canvas. You will use your SacLink account to login to MySacState from there is a link to Canvas. In Canvas, you will access online lessons, course materials, and resources.

To access this course on Canvas you will need access to the Internet and a supported Web browser (Internet Explorer, Firefox, Safari).

Technical Assistance

If you need technical assistance at any time during the course or to report a problem with Canvas you can:

- Visit the Canvas [Student Resources Page](#)

Important Note: This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check Canvas for corrections or updates to the syllabus. Any changes will be clearly noted in course announcement and sent to your Sacramento State email.

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Part 2: Course Objectives

At the conclusion of the course, the goal is for you to have a clear understanding of the fundamental topics in Biological Psychology and how they contribute to human and animal behavior.

The course objectives are for you to be able:

- 1) to explain how neurons communicate and how drugs impact this communication,
- 2) to differentiate neuroanatomical distinct cortical (primary sensory areas) and subcortical (the basal ganglia, amygdala, etc....) structures of the nervous system,
- 3) to discuss how different sensory systems (e.g. visual stimuli) process and perceive stimuli in our environment,
- 4) to compare and contrast the role of the endocrine system (hormonal control) in reproductive behavior and in other basic functions of the body (i.e. either sleep or ingestive behavior),
- 5) to describe how synaptic modification within neural circuits underlie learning and memory, and
- 6) to apply what you have learned to understand the biological basis of mental illness.

You will meet the objectives listed above through a combination of the following activities in this course:

- Attend all class sessions and read assigned materials *prior to* lecture.
- Complete In Class Assignments.
- Complete weekly Quizzes.
- Complete four Examinations.

Regular class attendance and completing reading assignments as assigned will be necessary for the successful completion of this class.

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Part 3: Topic Outline/Schedule

Below is a general topic outline for the semester. Please refer to the “**Daily Schedule**”, which follows, for important class due dates.

- **Module 1 – Connecting Your Brain to Behavior (Week 01)**
 - 1.1: Introduction to the course and Biological Psychology.
 - 1.2: A physiological approach to psychological questions.
- **Module 2 – Neuronal Communication (Week 02-04)**
 - 2.1: Communication within neurons.
 - 2.2: Communication between neurons.
 - 2.3: The effects of drugs on neuronal communication.
- **Module 3 – Neuroanatomy (Week 04-05)**
 - 3.1: Cortical & subcortical structure in the brain.
 - 3.2: The spinal & cranial nerves.
- **Module 4 – Sensation & Perception (Week 06-08)**
 - 4.1: Visual processing: Transduction to perception. The Eye & Primary Visual Cortex.
 - 4.2: Visual processing: Perception of form. Associative Visual Cortices.
 - 4.3: Auditory processing: An example of another electrical sense.
 - 4.4: Gustatory processing: An example of a chemical sense.
- **Module 5 – Endocrine System & Its Influence on Behavior (Week 9-11)**
 - 5.1: Hormonal regulation of sexual & maternal behavior.
 - 5.2: Hormonal control of when we start & stop a meal.
- **Module 6 – Neurobiology of Learning & Memory (Week 11-13)**
 - 6.1: Emotional learning & memory.
 - 6.2: Stimulus-response learning & memory.
 - 6.3: Declarative/episodic learning & memory.
- **Module 7 – Neurobiology of Mental Illness (Week 14-15)**
 - 7.1: Biological basis of schizophrenia, depression and anxiety disorders.
 - 7.2: Biological basis of autism, ADHD, PTSD and substance abuse.

Important Note: This schedule and due dates is subject to change. It is the student’s responsibility to check for and keep up with changes announced on Canvas. A copy of lecture slides can be found on Canvas under “**Course Content**”. If you have any questions, please contact Dr. Furtak.

Daily Schedule				
Week	Module	Reading Assignment	Date	Lecture Topics & Assessment
01	1.1	Review Course Syllabus on Canvas	Tu, Aug. 29	LECTURE 1: Introduction to the course and Biological Psychology.
	1.2	Read Ch. 1 pp. 1-18	Th, Aug. 31	LECTURE 2: A physiological approach to psychological questions. ONLINE QUIZ 1: Available Thur. 5pm to Sat. 11:59pm
02	2.1	Read Ch. 2 pp. 19-34	Tu, Sept. 5	LECTURE 3: Communication within neurons: Ion movement and the resting membrane potential.
	2.1	Read Ch. 2 pp. 34-37	Th, Sept. 7	LECTURE 4: Communication within neurons: The action potential. ONLINE QUIZ 2: Available Thur. 5pm to Sat. 11:59pm
03	2.2	Read Ch. 2 pp. 37-47	Tu, Sept. 12	LECTURE 5: Communication between neurons.
	2.3	Read Ch. 4 pp. 76-86	Th, Sept. 14	LECTURE 6: The effects of drugs on neuronal communication: Sites of drug action at the synapse. ONLINE QUIZ 3: Available Thur. 5pm to Sat. 11:59pm
04	2.3	Read Ch. 4 pp. 86-99	Tu, Sept. 19	LECTURE 7: The effects of drugs on neuronal communication: How specific drugs affect your brain.
	3.1	Read Ch. 3 pp. 48-69	Th, Sept. 21	LECTURE 8: Cortical & subcortical structure in the brain: Basic features & cortical structures in the brain. ONLINE QUIZ 4: Available Thur. 5pm to Sat. 11:59pm
05	3.2	Read Ch. 3 pp. 69-75	Tu, Sept. 26	LECTURE 9: The spinal & cranial nerves. IN CLASS REVIEW FOR EXAM 1: Modules 2-3 (Ch: 2, 3, and 4)
		Study for Exam	Th, Sept. 28	Exam 1: Modules 2-3 (Ch: 2, 3, and 4) note: Chapter 1 will not be on the exam

Week	Module	Assignment	Date & Location	Topics & Assessment
06	4.1	Read Ch. 6 pp. 128-138	Tu, Oct. 3	LECTURE 10: Visual processing: Transduction to perception. <i>The Eye</i> .
	4.1	Read Ch. 6 pp. 138-142	Th, Oct. 5	LECTURE 11: This class was canceled. ONLINE QUIZ 5: Available Thur. 5pm to Sat. 11:59pm
07	4.2	Read Ch. 6 pp. 142-154	Tu, Oct. 10	LECTURE 12: Visual processing: Transduction to perception. <i>Primary visual cortex</i> .
	4.3	Read Ch. 7 pp. 156-169	Th, Oct. 12	LECTURE 13: Visual processing: Perception of form. <i>Associative visual cortices</i> . ONLINE QUIZ 6: Available Thur. 5pm to Sat. 11:59pm
08	4.3	Read Ch. 7 pp. 179-182	Tu, Oct. 17	LECTURE 14: Auditory processing: Auditory processing: An example of other electrical senses.
	4.4	No reading	Th, Oct. 19	LECTURE 15: Auditory processing: continued. NO GUSTATION. IN CLASS REVIEW FOR EXAM 2: Module 4 (Ch: 6 and 7) ONLINE QUIZ 7: Available Thur. 5pm to Sat. 11:59pm.
09		Study for Exam	Tu, Oct. 24	Exam 2: Module 4 (Ch: 6 and 7)
	5.1	Read Ch. 9 pp. 217-239	Th, Oct. 26	LECTURE 15: Hormonal regulation of sexual behavior.
10	5.1	Read Ch. 9 pp. 239-243	Tu, Oct. 31	LECTURE 16: Hormonal regulation of maternal behavior.
	5.2	Read Ch. 11 pp. 266-279	Th, Nov. 2	LECTURE 17: Hormonal control of when we start a meal. ONLINE QUIZ 8: Available Thur. 5pm to Sat. 11:59pm
11	5.2	Read Ch. 11 pp. 279-296	Tu, Nov. 7	LECTURE 18: Hormonal control of when we stop a meal.
	6.1	Read Ch. 10 pp. 244-255	Th, Nov. 9	LECTURE 19: Emotional learning & Memory.
12	6.2	Read Ch. 12 pp. 298-310	Tu, Nov. 14	LECTURE 20: Neural mechanisms of learning. Synaptic Plasticity.
	6.2	Read Ch. 12 pp. 310-317	Th, Nov. 16	LECTURE 21: Stimulus-Response learning & memory. ONLINE QUIZ 9: Available Thur. 5pm to Sat. 11:59pm

Week	Module	Assignment	Date & Location	Topics & Assessment
13	6.3	Read Ch. 12 pp. 317-332	Tu, Nov. 21	LECTURE 22: Declarative learning & memory.
		No Reading	Th, Nov. 23	IN CLASS REVIEW FOR EXAM 3: Modules 5.2 & 6 (Ch: 10, 11 and 12)
14		Study for Exam	Tu, Nov. 28	Exam 3: Modules 5 & 6 (Ch: 9, 10, 11 and 12)
	6.3	Read Ch. 15 pp. 390-408	Th, Nov. 30	LECTURE 23: Biological basis of schizophrenia and depression. ONLINE QUIZ 10: Available Thur. 5pm to Sat. 11:59pm
15	7.1	Read Ch. 16 pp. 417-422	Tu, Dec. 5	LECTURE 25: Biological basis of autism and ADHD.
		Read Ch. 16 pp. 422-443	Th, Dec. 7	LECTURE 26: Biological basis of PTSD and substance abuse. ONLINE QUIZ 11: Available Thur. 5pm to Sat. 11:59pm
		Study for Exam	Tu, Dec. 12 3-5pm	FINAL EXAM: cumulative (Ch. 1-16)

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Part 4: Grading Policy

Graded Course Activities Visit the Assignments link in Canvas for details about each assignment listed below. (See Part 1 for more information about accessing tools and activities).

Points	Description
750 (250 pt Each)	1. <i>Exams.</i> There will be 4 exams, including a final examination. The lowest grade will be dropped. Thus, only the highest 3 exams will be counted toward the final grade. There will be <i>no</i> makeup examinations. If any of the exams are not taken due to absence, then the other 3 exams must be taken and no grades will be dropped.
150 (15 pt Each)	2. <i>Quizzes.</i> A total of 11 quizzes will be given; quizzes are included in the schedule, see section 3. <i>No</i> make-up quizzes will be given. The lowest grade will be dropped. Only the 10 highest grades will count toward your final grade.
100 (10 pt Each)	3. <i>In-class Assignments.</i> Over the semester, 10 assignments will be given in class on random days. These assignments must be completed during that class session. Credit will only be given to those students who are in attendance at the time of the assignment. Class attendance is <i>strongly</i> encouraged.
1000 pts	Total Points Possible

Letter Grade Assignment Final grades assigned for this course will be based on the percentage of total points earned and are assigned as follows:

Letter Grade	Points	Percentage	Performance
A	940-1000	94-100%	Excellent Work
A-	900-939	90-93.9%	Nearly Excellent Work
B+	870-899	87-89.9%	Very Good Work
B	840-869	84-86.9%	Good Work
B-	800-839	80-83.9%	Mostly Good Work
C+	770-799	77-79.9%	Above Average Work
C	740-769	74-76.9%	Average Work
C-	700-739	70-73.9%	Mostly Average Work
D+	670-699	67-69.9%	Below Average Work
D	600-669	60-66.9%	Poor Work
F	0-590	0-59.9%	Failing Work

Important note: For more information about grading at Sac State, visit the academic policies and grading section of the university catalog.

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Syllabus

Part 5: Course Policies**Late Work & Make Up Policy**

Late submissions will not be permitted. There will be no makeup exams or quizzes. If you miss an exam it must count as your lowest grade, which will be dropped from the calculation of your final grade. Additionally, missed quizzes must count toward the lowest quiz grade, the lowest grade is dropped. Be sure to pay close attention to deadlines & give yourself extra time in case of technical problems.

Viewing Grades in Canvas

Points you receive for graded activities will be posted to the Canvas Grade Book typically within 7 days. Click on the Grades link on the left navigation to view your points.

Questions About A Grade or Request for Grade Change

It is your responsibility to check these grades once posted. If you have a question or complaint about a grade posted on Canvas, then you must *email* Dr. Furtak at Furtak@csus.edu from your official CSUS email account within **7 days** of the posted grade. In the email, please put in subject line "**question regarding grade**" and within the email make sure to state which assignment you are referring to and exactly where you believe a grading error was made.

Participation

Student participation in the classroom is strongly encouraged. If you don't understand a topic or if I am lecturing too quickly, other classmates will feel the same way. Please speak up, ask questions, tell me to repeat things! Please see Part 4 for grading relative to attendance (i.e. in class assignments).

Build Rapport

If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let Dr. Furtak know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing Dr. Furtak when difficulties arise during the semester so that we can help you find a solution.

Complete Assignments

All assignments for this course will be submitted electronically through Canvas unless otherwise instructed. Assignments must be submitted by the given deadline or special permission must be requested from instructor *before the due date*. Extensions will not be given beyond the next assignment except under extreme circumstances.

Understand When You May Drop This Course

It is the student's responsibility to understand when they need to consider disenrolling from a course. Refer to the Sac State Course Schedule for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons includes: (1) documented and significant change in work hours, leaving student unable to attend class, or (2) documented and severe physical/mental illness/injury to the student or student's family.

Incomplete Policy

Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if there is a documented medical reason. All incomplete course assignments must be completed within 1 year.

Inform Your Instructor of Any Accommodations Needed

If you have a documented disability and verification from the [Office of Services to Students with Disabilities \(SSWD\)](#), and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to SSWD and meet with a SSWD counselor to request special accommodation *before* classes start.

SSWD is located in Lassen Hall 1008 and can be contacted by phone at (916) 278-6955 (Voice) (916) 278-7239 (TDD only) or via email at sswd@csus.edu.

Commit to Integrity

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom.

Sac State's Academic Honesty Policy & Procedures

"The principles of truth and honesty are recognized as fundamental to a community of scholars and teachers. California State University, Sacramento expects that both faculty and students will honor these principles, and in so doing, will protect the integrity of academic work and student grades."

Read more about Sac State's [Academic Honesty Policy & Procedures](#)

Definitions (Source: Sacramento State University Library)

At Sac State, "**cheating** is the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means."

"**Plagiarism** is a form of cheating. At Sac State, "plagiarism is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person's contribution."

<p>Important Note: Any form of academic dishonesty, including cheating and plagiarism, will be reported to the office of student affairs.</p>
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