PSY 330 - 07
Foundations of Behavioral Neuroscience (Fall 2021)
AuSable Hall 1310
M W F 12:00 – 12:50,

Instructor: Jerry S. Fisher, Ph.D.

Email: fishejer@gvsu.edu

Office hours: 1:00pm – 2:30pm MW & 1:00pm – 2:00pm F (Virtual or In-person at 2115 AuSable Hall).

Textbook: Physiology of Behavior, 12th Edition by Neil R. Carlson & Melissa A. Birkett (*11th or 10th editions, with sole author Neil Carlson, are approved for use. Page numbers of readings may vary).*

Course Objectives:

Upon successful completion of this course, students should be able to:

- Identify the structure and function of the major parts of the nervous system
- Describe the process of action potentials
- Describe the process of neurotransmission
- Identify the behavioral function of major brain chemical systems
- Discuss basic research in behavioral neuroscience
- Relate biological processes and concepts to everyday behavior

Lakers Together:

Classes are held in person in AuSable Hall 1310. Face coverings must be worn during class time, must cover the mouth and nose, and fit snugly against the sides of the face.

In the Event of Illness:

Make up exams and extensions to the writing deadlines will be available in the event of illness. If such an event happens, please provide me with official documentation, such as a physician's note.

Holiday and Special Needs:

Please let me know at the beginning of the semester if you will have to miss a class or reschedule an exam due to a religious holiday. The more notice I am given, the more likely it is that I can accommodate your needs.

Please also let me know at the beginning of the semester if you have a disability or special needs in the classroom or on exams. I will work with Disability Support Services to make accommodations for you.

GVSU Course Policies:

This course is subject to the GVSU policies listed at http://www.gvsu.edu/coursepolicies
At this website you can find all policies related to such topics as academic integrity, disabilities, inclusion, and discrimination. Please note that you are responsible for knowing and following the policies that are listed here. It is a good idea to read through them to familiarize yourself with them.

Note that violations of the academic integrity policy, including plagiarism or cheating on exams, will result in the student earning a failing grade for the assignment. If the violation is severe, the student will fail the course.

Grade Breakdown and Scale:

Your grades will be based on 12 homework assignments (120 points total), 12 quizzes (120 points total), and four exams (400 points total). Your letter grade will be based on the proportion of these points that you receive out of the total 640 possible (see the Grade Scale). Extra credit opportunities will be announced in class.

Grade Item	**Points**
Homework	120
Quizzes	120
Exam 1	100
Exam 2	100
Exam 3	100
Exam 4 (Final)	100
Total	640

Grade Scale:

Grade	Percent	Grade	Percent
A	94-100%	C+	78-79%
A-	90-93%	C	72-77%
B+	88-89%	C-	70-71%
B	82-87%	D	60-69%
B-	80-81%	F	0-59%

Grading is NOT on a curve. Your percentage will be rounded to the nearest integer (e.g., 87.4 → 87 or 87.5 → 88). In the interest of fairness, I will follow this rule strictly for all students.

Course schedule: *(Subject to change)*

Date	***Topic***	***Textbook Reading***	***Assignments***
M 8/30	A Brief History of Neuroscience	Ch. 1 pp 1-20	
W 9/1	Cells of the Nervous System	Ch. 2, pp 21-32	
F 9/3	Neuronal Communication	Ch. 2, pp 33-53	
M 9/6	*No Class (Labor Day)*		
W 9/8	Features of the Nervous System	Ch. 3, pp 57-73	HW 1 Due / Quiz 1
F 9/10	Structure and Function of CNS	Ch. 3, pp 74-86	

M 9/13	Principles of Psychopharmacology; Sites of Drug Action	Ch. 4, pp 89-100	
W 9/15	Neurotransmitters and Neuromodulators	Ch. 4, pp 100-115	HW 2 Due / Quiz 2
F 9/17	Ablation and Neural Activity	Ch. 5, pp 119-141	
M 9/20	Neurochemical and Genetic Methods	Ch. 5, pp 141-148	
W 9/22	Exam 1 Review		HW 3 Due / Quiz 3
F 9/24	**EXAM 1**		
M 9/27	The Eye	Ch. 6, pp 150-163	
W 9/29	Visual Processing Areas	Ch. 6, pp 163-187	
F 10/1	Audition; Vestibular System	Ch. 7, pp 189-206	HW 4 Due / Quiz 4
M 10/4	Somatosenses; Gustation and Olfaction	Ch. 7, pp 207-229	
W 10/6	Skeletal Muscle; Control of Movement	Ch. 8, pp 232-255	HW 5 Due / Quiz 5
F 10/8	Complex Motor Behavior; Apraxia	Ch. 9, pp 255-260	
M 10/11	Sleep, Physiological Mechanisms, Disorders	Ch. 9, pp 262-288	
W 10/13	Biological Clocks; Exam 2 Review	Ch. 9, pp 289-295	HW 6 Due / Quiz 6
F 10/15	**EXAM 2**		
M 10/18	Sexual Development; Sexual Behavior	Ch. 10, pp 297-312	
W 10/20	Sexual Behavior; Sexual Orientation; Parental Behavior	Ch. 10, pp 313-328	
F 10/22	Fear and Aggression; Impulse Control	Ch. 11, pp 332-350	HW 7 Due / Quiz 7
M 10/25	*No Class (Fall Break)*		
W 10/27	Communication of Emotion, Feelings of Emotions	Ch. 11, pp 351-364	
F 10/29	Drinking and Thirst; Eating, Hunger, and Satiety	Ch. 12, pp 367-385	HW 8 Due / Quiz 8
M 11/1	Brain Mechanisms of Ingestion; Obesity and Eating Disorders	Ch. 12, pp 386-403	
W 11/3	Stimulus-Response, Motor, Perceptual Learning	Ch. 13, pp 406-423	
F 11/5	Relational Learning; Amnesia; Long-Term Potentiation	Ch. 13, pp 424-445	
M 11/8	Memory Consolidation; Exam 3 Review		HW 9 Due / Quiz 9
W 11/10	**EXAM 3**		
F 11/12	Language Production, Comprehension, and Disorders	Ch. 14, pp 447-463	
M 11/15	Disorders of Language and Writing	Ch. 14, pp 464-478	
W 11/17	Tumors, Strokes, Injury; Developmental Disorders	Ch. 15, pp 483-509	
F 11/19	Degenerative Disorders	Ch. 15, pp 510-517	HW 10 Due / Quiz 10
M 11/22	Schizophrenia	Ch. 16, pp 520-536	
W 11/24	*No Class (Thanksgiving)*		
F 11/26	*No Class (Thanksgiving)*		
M 11/29	Affective disorders	Ch. 16, pp 537-550	
W 12/1	Stress and Anxiety; Obsessive-Compulsive Disorder	Ch. 17, pp 553-577	HW 11 Due / Quiz 11
F 12/3	Autism Spectrum Disorder	Ch. 17, pp 578-586	
M 12/6	Substance Abuse	Ch. 18, pp 588-602	
W 12/8	Drug Abuse and Treatment	Ch. 18, pp 603-618	
F 12/10	Exam 4 Review		HW 12 Due / Quiz 12
TBA	**EXAM 4**		