Subject Details	**Subject title, code and credit hours**	PSYC 417, Nervous System: Higher Nerveous Activity and Somotosensory System, 3KU (6 AKTS)	
	Department	Psychology	
	Program (bachelor's and master's degree)	Bachelor's degree	
	Associated Term	2025 fall	
	Instructor	Zeynalova Aygun	
	E-mail:	isgandarovaaygun@gmail.com	
	Phone	+994 55 268 29 30	
	Lecture room/Schedule	Nefchilar campus	
	Consultations	After the classes- 30 minute	
Teaching language	English		
Subject type (mandatory/elective)	Mandatory		
Readings	Change Your Brain, Change Your Life (Revised and Expanded): The Breakthrough Program for Conquering Anxiety, Depression, Obsessiveness, Lack of Focus, Anger, and Memory Problems Paperback – November 3, 2015 By Daniel G. Amen M.D Textbook of Medical Physiology – Twelfth Edition By Guyton and Hall		
Teaching methods	Lecture	+	
	Group discussions	+	
	Activities	+	
	Analysis of activities	+	
	Other	+	
Assessment and Grading	Components	Deadlines	Percentage (%)
	Attendance	During semester	5
	Participation	During semester	5
	Quiz I	Until midterm exam	10
	Midterm Exam	Week 8	30
	Quiz II	Until final exam	10
	Final Exam	January	40
Course Description	This course offers a comprehensive exploration of the higher nervous system and the somatosensory system, focusing on the intricate neural mechanisms that underlie cognition, emotion, perception, and sensation. Students will examine how the brain processes information, controls voluntary and involuntary movements, and regulates key physiological functions. Through a multidisciplinary approach that integrates neuroanatomy, neurophysiology, and cognitive neuroscience, the course aims to deepen students' understanding of the structure and function of the central nervous system. Emphasis will be placed on the functional organization of the cerebral cortex, sensory pathways, and their relevance to behavior and mental processes.		
Course Aims	By the end of this course, students will be able to: • Explain the key structures and functions of the higher nervous system and somatosensory system. • Describe the neural mechanisms underlying various cognitive, emotional, and sensory processes. • Analyze the role of the brain in regulating behavior and physiological functions.		

	• Apply their knowledge to understand and interpret research findings in neuroscience. • Critically evaluate different theoretical perspectives on higher nervous activity and the somatosensory system.
Learning Outcomes	Students will: • Understand brain structures and functions. • Describe neural mechanisms. • Analyze research findings. • Evaluate theoretical perspectives. • Apply knowledge to real-world phenomena. • Communicate effectively on neuroscience topics. • Recognize the importance of neuroscience research. • Demonstrate ethical considerations in neuroscience.
Marking Criteria	Attendance • Regular Attendance: Attends class sessions consistently, with minimal absences. • Punctuality: Arrives on time for class sessions. Participation • Active Engagement: Regularly contributes to class discussions and activities. • Quality of Contributions: Offers thoughtful and insightful comments that demonstrate understanding of the material. • Respectful Dialogue: Listens attentively to others and engages in respectful and constructive dialogue. Quiz I • Knowledge and Understanding: Demonstrates a clear understanding of the key concepts, and theories covered in the first half of the semester. • Application: Can effectively apply theoretical knowledge to real-world scenarios and case studies related to the covered material. • Accuracy: Answers questions accurately and comprehensively. Midterm Exam • Knowledge and Understanding: Demonstrates a clear understanding of key concepts and theories related to Nervous System: Higher Nerveous Activity and Somotosensory System. • Critical Thinking: Applies critical thinking skills to analyze and evaluate information, drawing logical conclusions and making well-supported arguments. • Clarity and Organization: States ideas clearly and logically, using appropriate language and structure. Quiz II • Knowledge and Understanding: Demonstrates a clear understanding of the key concepts and theories covered in the second half of the semester.

	• Application: Can effectively apply theoretical knowledge to real-world scenarios and case studies related to the remaining material. • Accuracy: Answers questions accurately and comprehensively. Final Exam • Comprehensive Understanding: Demonstrates a comprehensive understanding of the course material, including key concepts and theories. • Critical Thinking and Application: Applies critical thinking skills to analyze and evaluate information, and effectively applies theoretical knowledge to real-world scenarios. • Problem-Solving: Can solve problems related to psychopathology, demonstrating a deep understanding of the subject matter. • Clarity and Organization: States ideas clearly and logically, using appropriate language and structure.
Rules (educational policy and behavior)	We want to build a classroom climate that is safe for all. It is important that we • display respect for all members of the classroom – including the instructor and students; • pay attention to and participate in all class sessions and activities; • avoid unnecessary disruption during class time (e.g. having private conversations, reading the newspaper, surfing the Internet, doing work for other classes, making/receiving phone calls, text messaging, etc.); • avoid racist, sexist, homophobic, or other negative language that may unnecessarily exclude members of our campus and classroom. This is not an exhaustive list of behaviors; rather, it represents examples of the types of things that can have a dramatic impact on the class environment.

Schedule

Week	Topics	Reference
1.	Introduction to Nervous System: Higher Nerveous Activity and Somotosensory System	
2.	Organization of the Nervous System, Basic Functions of Synapses, and Neurotransmitters	Textbook of Medical Physiology - Chapter 45, pp. 543-557
3.	Sensory Receptors, Neuronal Circuits for Processing Information	Textbook of Medical Physiology - Chapter 46, pp. 559-569
4.	Somatic Sensations: I. General Organization, the Tactile and Position Senses	Textbook of Medical Physiology - Chapter 47, pp. 571-581
5.	Somatic Sensations: II. Pain, Headache and Thermal Sensations	Textbook of Medical Physiology - Chapter 48, pp. 583-592
6.	Quiz I	
7.	States of Brain Activity—Sleep, Brain Waves, Epilepsy, Psychoses	Textbook of Medical Physiology - Chapter 59, pp. 721-727
8.	Midterm Exam	

9.	Higher Nervous Activity – Conditioned and Unconditioned Reflexes	Textbook of Medical Physiology - Chapter 60, pp. 836-849
10.	Limbic System Prescriptions	Change Your Brain, Change Your Life - pp. 105-132
11.	Basal Ganglia Prescription	Change Your Brain, Change Your Life - pp. 148-169
12.	Presentation/Group discussion	
13.	Prefrontal Cortex Prescriptions	Change Your Brain, Change Your Life - pp. 188-205
14.	Quiz II	
15.	Temporal Love Prescription	Change Your Brain, Change Your Life - pp. 245-263
Final Exam		