

NEUROTRANSMITTER AND SINAPS ON NERVOUS SYSTEM

1	Course Title:	NEUROTRANSMITTER AND SINAPS ON NERVOUS SYSTEM	
2	Course Code:	VFZ5014	
3	Type of Course:	Optional	
4	Level of Course:	Second Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	1.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. Murat YALÇIN	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	muraty@uludag.edu.tr +90 224 294 1228 Uludağ Üniversitesi Veteriner Fakültesi Fizyoloji Anabilim Dalı Görükle Bursa 16059	
17	Website:		
18	Objective of the Course:	This course focuses on the concept of neurotransmitters and synapse in nervous system	
19	Contribution of the Course to Professional Development:	As a veterinarian-physiologist, provides an approach to vitality phenomena in terms of the importance of electrical and chemical neurotransmission.	
20	Learning Outcomes:		
		1	Introduction to Neural Communication
		2	Action Potentials
		3	Synapses and Neuronal Integration
		4	Neurotransmitters
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Introduction to Neural Communication	Microdialysis from different brain areas	

2	Changes in membrane potential and ion movement during an action potential	Microinjection to different brain area		
3	Structure of synapse	Microdialysis from different brain areas		
4	Events at a synapse	Microinjection to different brain area		
5	Excitatory and inhibitory synapses	Microdialysis from different brain areas		
6	Modulation of synaptic transmission	Microinjection to different brain area		
7	Postsynaptic potential; Summation	Microdialysis from different brain areas		
8	Action potential initiation at the axon	Microinjection to different brain area		
9	Role of neurotransmitters in the synapse	Microdialysis from different brain areas		
10	Neuropeptides as neuromodulators	Microinjection to different brain area		
11	Presynaptic inhibition or facilitation	Microdialysis from different brain areas		
12	Receptors	Microinjection to different brain area		
13	Amino acid transmitters; Acetylcholine	Microdialysis from different brain areas		
14	Catecholamines; Serotonin; Neuroactive	Microinjection to different brain area		
Activities		Number	Duration (hour)	Total Work Load (hour)
Theoretical	Materials:	2	1.00	2.00
Practicals/Labs		14	2.00	28.00
Self study and preparation		Domestic Animals 3rd Edition, USA, 2005.	28.00	28.00
Homeworks		1	5.00	5.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
TERM LEARNING ACTIVITIES		NUMBE R	WEIGHT	
Midterm exams		0	0.00	0.00
Others		3	10.00	30.00
Final Exams		0	15.00	15.00
Total Work Load				120.00
Total work load/ 30 hr		1	75.00	4.00
Final Exam				4.00
ECTS Credit of the Course				4.00
Contribution of Term (Year) Learning Activities to Success Grade		25.00		
Contribution of Final Exam to Success Grade		75.00		
Total		100.00		
Measurement and Evaluation Techniques Used in the Course		Classical written exam		
24	ECTS / WORK LOAD TABLE			

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	4	4	4	5	5	4	4	5	4	5	5	0	0	0	0
ÖK2	5	4	4	4	5	5	4	4	5	4	5	5	0	0	0	0
ÖK3	5	4	4	4	5	5	4	4	5	4	5	5	0	0	0	0
ÖK4	5	4	4	4	5	5	4	4	5	4	5	5	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low			3 Medium			4 High			5 Very High				