INSTRUMENTS AND WORKING PRINCIPLES USED IN PHYSIOLOGICAL STUDIES

1	Course Title:	INSTRUMENTS AND WORKING PRINCIPLES USED IN PHYSIOLOGICAL STUDIES
2	Course Code:	VFZ6008
3	Type of Course:	Compulsory
4	Level of Course:	Third 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:	Dr. Ögr. Üyesi Füsun AK SONAT
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	fusunak@uludag.edu.tr +90 224 294 1229 Uludağ Üniversitesi Veteriner Fakültesi Fizyoloji Anabilim Dalı Görükle Bursa 16059
17	Website:	
18	Objective of the Course:	The introduce of devices used in the analysis in the field of physiology and to teach their working principles.
19	Contribution of the Course to Professional Development:	Increase of the knowledge and experience of students about the devices used in the laboratory.
20	Learning Outcomes:	
	1	Recognizes the instruments and devices used for analysis in physiological studies and knows their working principles.
	2	The student learns to principles of working in the laboratory
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21	Course Content:	

Course Content:

Week	Theoretical	Practice
1	Working principles in the laboratory	Practices of working principles in the laboratory
2	Introduction about of mixers	Mixers used in the laboratory
3	Information about of weighing devices	Using of Weighing devices used in the laboratory

4	Microscope, principles of working with microscope	Using of Microscope
5	Information about the distilled water device and the dry ice maker	Using of Distilled water device and dry ice maker used in the laboratory
6	Information about pH meters and micropipettes	Use of PH meters and micropipettes used in the laboratory
7	Information about spectrophotometric devices	Use of Spectrophotometric devices in the laboratory
8	Information about manual type Spirometer	Use of manual type spirometer in the laboratory
9	Information about the Computer compatible model Spirometer	Use of computer-compatible model Spirometer in the laboratory
10	Veterinary ECG device I: Working principle	use of ECG device
11	Veterinary ECG device II: Interpretation of the records	ECG device recording
12	Information about isolated organ bath	Use of isolated organ bath
13	MP35 Physiological data logger I: Working Principle	Using the MP35 Physiological data logger
14	MP35 Physiological data logger II: Evaluated parameters and measurement	Measurements on MP35 Physiological data logger

22	Textbooks, References and/or Other Materials:	1-Guyton, A.C., Hall, J.E. (2001). Textbook of Medical Physiology. Tıbbi Fizyoloji. 10th ed. (Çev.: Çavuşoğlu, H.), W.B. saunder Company. Yüce Yayımları A.Ş. – Nobel Tıp Kitabevleri Ltd.Şti. 2-Church, D.C. (1988). The Ruminant Animal Digestive Physiology and Nutrition. Waveland Press Inc., USA 3-Reece, W.O. (2009). Functional Anatomy and ... Philadelphia, USA ... 6-Konuk T. (1975). Pratik Fizyoloji I. Ankara Üniversitesi ...
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBE	WEIGHT
Midterm Exam	0	0.00
Home work project	1	25.00
Total	2	100.00

... Success Grade	
Contribution of Final Exam to Success Grade	75.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	classical exam

24	**ECTS / WORK LOAD TABLE**

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	1.00	14.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	1.00	14.00
Homeworks	1	20.00	20.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Others	3	10.00	30.00
Final Exams	1	10.00	10.00
Total Work Load			116.00
Total work load/ 30 hr			3.87
ECTS Credit of the Course			4.00

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	5	4	5	5	5	4	4	4	5	4	0	0	0	0

ÖK2	5	5	5	5	5	5	5	4	4	5	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**