CARDIOVASCULAR SYSTEM

1	Course Title:	CARDIOVASCULAR SYSTEM	
2	Course Code:	TFZ 5006	
3	Type of Course:	Optional	
4	Level of Course:	Second Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	9.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	No	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. KASIM ÖZLÜK	
15	Course Lecturers:	Prof. Dr. Kasım Özlük Prof. Dr. Nevzat Kahveci	
16	Contact information of the Course Coordinator:	Prof. Dr. Kasım Özlük kasim@uludag.edu.tr 2954001 Tıp Fakültesi Fizyoloji Anabilim Dalı	
17	Website:	http://saglikbilimleri.uludag.edu.tr/anabilimdallari.php	
18	Objective of the Course:	To examine how the heart works like a pump, its electrical activity and to understand the basic mechanism of the ECG, the regulation of the activity of the heart according to the needs of the organism and the regulation mechanisms of blood flow and blood pressure.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	- To explain the physiological properties of the heart muscle and cardiac action potential
		2	To interpret how the heart rhythm
		3	To explain how regulates the heart the operating speed according to the needs of the body
		4	To explain the events that unfolded during the cardiac cycle
		5	Understanding about the fundamental concepts of electrocardiogram, electrocardiogram record and interpret
		6	To interpret heart sounds by listening
		7	To explain the physical properties of circulation, the functions of arteries and veins
		8	To explain regulation of blood pressure and able to measure blood pressure
		9	To explain microcirculation, capillary membrane, passage of substances and to the control principles of blood flow
		10	
21	Course Content:		
	Course Content:		
Week	Theoretical	Practice	

1	Physiological properties of the heart muscle.	Investigations in the heart of the frog and the frog heart preparation preparation.
2	Rhythmical excitation of the heart, the heart conduction system	Frog heart; Mekanogram record The effect on the heart activity of temperature change
3	Regulation of heart function	Frog heart; Stannius' 1 and 2 bond All-or-nothing principle
4	The cardiac cycle	Frog heart; Heart extrasystole, refractory period (MRD-RRD), compensatory rest period
5	The nomal electrocardiogram	Elektrocardiogram; Definition of P, QRS and T waves, Bipolar leads (DI, D II and D III), unipolar chest leads (V1-6) and the augmented limb leads (aVR, aVL, aVF) 's recording Extremity leads (aVR, aVL, aVF)'s recording
6	Electrocardiographic leads,	ECG recording and interpretation in human
7	Vectorial analysis of Electrocardiogram	ECG recording and vector analysis in humans
8	Cardiac arrhythmias and their electrocardiographic interpretation	Areas of the heart sounds to listen Listening to heart sounds Examination of records phonocardiograms
9	Physical characteristics of circulation	Arterial blood pressure measurement Pulse counting Determining the direction of venous valves
11	Capillaries and the lymphatic system, exchange of substances between blood	Exercise and after ; ECG, heart sounds and phonocardiogram
12	Local and hormonal control of capillary blood flow	Exercise and after ; Blood pressure and pulse count
13	Rapid control of blood pressure	As a direct measurement of arterial blood pressure Flowmeter)
14	Materials:	Medical Physiology William F. Ganong Interactive Physiology Benjamin Cummings

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	28	3.00	84.00
Homeworks	4	8.00	32.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Others	10	6.00	60.00
Final Exams	1	40.00	40.00
Total Work Load			272.00
Total work load/ 30 hr			9.07
ECTS Credit of the Course			9.00

23	Assesment

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	0	0.00
Quiz	0	0.00
Home work-project	4	0.00
Final Exam	1	100.00
Total	5	100.00
Contribution of Term (Year) Learning Activities to Success Grade		0.00
Contribution of Final Exam to Success Grade		100.00
Total		100.00

Measurement and Evaluation Techniques Used in the Course	

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	5	0	4	0	0	0	0	0	3	0	0	0	0	0	0	0
ÖK5	5	0	4	0	0	0	0	0	3	0	0	0	0	0	0	0
ÖK6	5	0	4	0	0	0	0	0	3	0	0	0	0	0	0	0
ÖK7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	5	0	4	0	0	0	0	0	3	0	0	0	0	0	0	0
ÖK9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**			**3 Medium**			**4 High**			**5 Very High**				