AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Physiology II						
Course Code	BYF506		Couse Level	Second Cycle (Master's Degree)			
ECTS Credit	6	Workload	150 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	The purpose of the course is to be able to tell about blood physiology, cardiovascular system physiology, respiratory system physiology, kidney and acid-base physiology, and gastrointestinal system physiology.						
Course Content	Blood physiology, cardiovascular system physiology, respiratory system physiology, kidney and acid-base physiology, and gastrointestinal system physiology.						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study, Problem Solving						
Name of Lecturer(s)							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Guyton ve Hall, Medical Physiology, 2010
2	Ganong , Fizyoloji, 2011

Week	Weekly Detailed Course Contents	
1	Theoretical	Physiology of the blood: erytrocytes, anemia and blod clotting
2	Theoretical	The resistance of the body to infections: leukocytes
3	Theoretical	Circulatory physiology: Heart as a pump and its electrical stimulation
4	Theoretical	Microcirculation and lymphatic system
5	Theoretical	The control of arterial pressure
6	Theoretical	Lung physiology: ventilation of the lungs, the physical basis of gas exchange
7	Theoretical	The transfer of oxygen and carbondioxide in body fluids
8	Intermediate Exam	Midterm exam
9	Theoretical	The physiology of kidneys: glomerular filtration
10	Theoretical	The processing of the glomerular filtrate in the tubules
11	Theoretical	The control of the osmolarity of the extracellular fluids
12	Theoretical	Acid base equilibrium
13	Theoretical	Digestive physiology: motility, neuronal control and the transfer of food in digestive tract
14	Theoretical	The secretion function in digestive tract, digestion and absorbtion
15	Theoretical	Discussion
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	2	0	10	20
Reading	14	0	6	84
Midterm Examination	1	6	2	8
Final Examination	1	8	2	10
			Total Workload (Hours)	150
			[Total Workload (Hours) / 25*] = **ECTS**	6

25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to tell about the physiology of the blood
2	To be able to explain the physiology of respiratory and circulatory systems
3	To be able to explain the physiology of digestive and excretory systems
4	To be able to explain the physiology of thermoregulation
5	To be able to tell about the acid base physiology

Programme Outcomes *(Biophysics Master)*

1	To be able to acquire an up-to-date theoritical and pratical background on biophysical and electrobiophysical research
2	To be able to acquire a background needed for basic biophysical research and having the ability to use the teoritical and practical knowledge in the field
3	To be able to attain the ability to get access to the up-to-date knowledge, interpret and improve the information in the field of biophysics
4	To be able to attain the ability to perform experimental methods in the field, produce new approaches and ability to produce analytical solutions to the problems faced during application of new methods
5	To be able to reach a level to follow research in the field, to possess written and spoken communication skills and be able to join discussions
6	To be able to acquire knowledge and skill to apply scientific principles of ethics.
7	To be able to gain knowledge and skill about the basic issues of electric and magnetic fields, the interaction of light with matter, spectroscopy, radiation biophysics such as radiation, electromagnetic spectrum, ionizing radiation and radioactivity; learn about the physical properties of these issues and to be able to evaluate biological effects of radiation on tissues
8	To be able to construct knowledge and skill about the molecular structure and function in living systems, bioenergetic concepts, information theory and the processing of information in living systems
9	To be able to master about the basic principles of bioelectrical incidents that ocur in cells, such as transport across membranes, electrical properties of membranes, resting membrane potential, and to be able to discuss the bioelectrical behaviour of excitable membranes
10	To be able to define the kinds,sources and biophysical properties of bioelectrical signals, to store knowledge in areas of biophysical concepts and characteristics such as nerve action potential and compound nerve action potential and to record to record these potential variants ,analyze and evaluate the results
11	To be able to define basic biophysical principles of the visualization techniques used in medical field and the techniques used to determine biological signals, such as electromyigraphy (EMG), electroencephalography (EEG), and electrocardiography (ECG), and attain the ability to apply these techniques
12	To be able to attain knowledge on molecular biophysics and its basic principles
13	To be able to attain the ability to plan and conduct projects in the field of biophysics, and attain the ability to write and publish scientific results
14	To be able to acknowledge the national and international laws and regulations about the concepts related to biophysics
15	To be able to attain the skills to organize activities together with non-governmental organizations or to conduct collaborative projects with other disciplines
16	To be able to acquire the ability of critical thinking, making judjements and solving problems in the field of biophysics
17	To be able to able to use statistical, computational and communicational tools, which can be applied in the field of biophysics
18	To be able to use basic knowledge and skills of the field; be able to evaluate data, identify problems and propose solutions

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	5	5	5	5	5
P2	4	4	4	4	3
P3	5	5	5	4	5
P4	4	4	4	4	3
P5	5	5	4	4	5
P6	3	3	3	2	2
P7	2	1	2	2	1
P8	5	5	5	5	5
P9	4	4	4	4	4
P10	1	2	3	2	1
P11	1	1	2	1	1
P12	1	1	2	1	1
P13	3	3	2	2	3
P14	1	2	2	2	1
P15	1	2	2	2	1

P16	3	4	4	3	3
P17	3	2	4	3	3
P18	5	5	4	4	5