

COURSE INFORMATION

Course Name	Code	Semester	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	National Credit	ECTS
EXERCISE PHYSIOLOGY		Spring	2			2	
Prerequisites	None						
Course language	English						
Course type	Elective course						
Mode of Delivery (face to face, distance learning)	Online						
Learning and teaching strategies	Lecture, research, discussion						
Instructor(s)	Assoc. Prof. Eda Ağaşcıoğlu						
Course objective	Concept of energy, energy costs of different exercises, energy pathways of the organism, recovery after exercise. Adaptation of different physiological systems to acute and chronic exercise, mechanisms of acute and chronic adaptation. exercise in different environments. Measurement methods in exercise physiology						
Learning outcomes	Students who successfully complete this course; 1. Explains energy systems and their relationship with exercise. 2. Explains the physiology of respiratory, circulatory and nervous systems and their relationship with exercise. 3. Explains the physiology of the muscular system, hormonal and immune systems and their relationship with exercise.						
Course Content	Energy systems and exercise relationship, muscular and nervous system physiology, Respiratory and circulatory systems, recovery after exercise, exercise practices and physical fitness, high altitude physiology.						
References	Ergen E. (2002). Egzersiz Fizyolojisi Ankara: Nobel Yayın Dağıtım. McArdle W.D., Katch F.I., Katch V.L. (2000). Exercise Physiology. NY: Williams and Wilkins. ACSM's guidelines for exercise testing and prescription. (1995). Fifth ed. NY: Williams and Wilkins.						

Course Outline Weekly

Weeks	Topics
1	Introduction to exercise physiology
2	Energy sources (aerobic, anaerobic pathways). Aerobic glycolysis, Krebs cycle, ETS
3	Measuring the energy cost and energy consumption of exercise, post-exercise recovery
4	Functional properties of skeletal muscle, muscle fiber types.
5	Muscle sense organs and control of movement
6	Adaptations in the neuromuscular system with weight training
7	Hormonal changes and regulation in exercise
8	Midterm
9	The respiratory system
10	Gas exchange and transportation
11	Transport of gases and blood circulation
12	Control of heart breathing
13	High altitude physiology and altitude training applications
14	Physiological effects of training, Exercise and Physical Fitness
15	Final Exam

Assessment Methods

Course activities	Number	Percentage
Attendance	-	-
Laboratory	-	-
Application	-	-
Field activities	-	-
Specific practical training	-	-
Assignments	-	-
Presentation	-	-
Project	-	-
Seminar	-	-
Midterms	1	%40
Final exam	1	%60
Total		%100
Percentage of semester activities contributing grade success		%40
Percentage of final exam contributing grade success		%60
Total		%100

Workload and ECTS Calculation

Activities	Number	Duration (hour)	Total Work Load
Course Duration (x14)	14	2	28
Laboratory	-	-	-
Application	-	-	-
Specific practical training	-	-	-
Field activities	-	-	-
Study Hours Out of Class (Preliminary work, reinforcement, ect)	-	-	-
Presentation / Seminar Preparation	-	-	-
Project	-	-	-
Homework assignment	-	-	-
Midterms (Study duration)	1	20	20
Final Exam (Study duration)	1	30	30
Total Work Load			78

EXERCISE PHYSIOLOGY		PROGRAM LEARNING OUTCOMES																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
LO-1	Explain energy systems and their relationship with exercise.	5	1	2	2	1	1	1	1	1	4	3	1	1	1	2	1	1	1
LO-2	Explain the physiology of respiratory, circulatory and nervous systems and their relationship with exercise.	5	1	2	2	1	1	1	1	1	4	3	1	1	1	2	1	1	1
LO-3	Explain the physiology of the muscular system, hormonal and immune systems and their relationship with exercise.	5	1	2	2	1	1	1	1	1	4	3	1	1	1	2	1	1	1

Additive Level: 1: Very Low 2: Low 3: Medium 4: High 5: Very High