

TOROS ÜNİVERSİTESİ

Vocational School
Physiotherapy

Course Information

EXERCISE PHYSIOLOGY					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
FTR110	Spring	2	0	2	2

Prerequisites and co-requisites	none
Language of instruction	Turkish
Type	Required
Level of Course	Associate
Lecturer	Öğr.Gör.Yasemin TEZCAN
Mode of Delivery	Face to Face
Suggested Subject	none
Professional practise (internship)	None
Objectives of the Course	The aim of the course is to teach the effect of exercise on body systems under various environmental conditions, to evaluate the problems that may occur during exercise, to understand the exercise proposals and to reflect on the basic practice.
Contents of the Course	Cardiovascular system and exercise, cardiovascular regulation and integration, assessment of functional capacity of the cardiovascular system, measurement of individual differences and energy capacity, exercise tests, energy expenditure at rest and physical activity, aerobic and anaerobic training, factors affecting maximal aerobic power, recovery pulmonary system and exercise respiration Exercise and hormonal system, ergogenic aids, thermoregulation and exercise, exercise control, acid-base balance muscle physiology, musculoskeletal and exercise, nerve physiology, synaptic transmission, excitation-inhibition neural control, position sense and kinesthesia, , Underwater and high altitude physiology, body composition.

Learning Outcomes of Course

#	Learning Outcomes
1	It defines the acute and chronic responses of the heart, circulatory and respiratory systems to exhalation.
2	It describes the acute and chronic responses of the musculoskeletal system and nervous system to exhalation.
3	Energy transfer in the body explains energy expenditure during rest, physical activity and exercise.
4	It specifies the principles and basic concepts of anaerobic and aerobic exercise training.

Course Syllabus

#	Subjects	Teaching Methods and Technics
1	ATP Generation Mechanisms and Energy Generation Resources	Visual supported expression. Discussion, group work, question-answer method
2	Muscle Exercise Alignment	Visual supported expression. Discussion, group work, question-answer method
3	Control of Body Movements	Visual supported expression. Discussion, group work, question-answer method
4	Pulmonary Ventilation, Gas Exchange and Gas Transport During Exercise	Visual supported expression. Discussion, group work, question-answer method
5	Respiration Control, Acid-Base Balance and Regulation Mechanism	Visual supported expression. Discussion, group work, question-

		answer method
6	Cardiovascular System, Cardiovascular Regulation and Integration	Visual supported expression. Discussion, group work, question-answer method
7	Functional Capacity of the Cardiovascular System and Exercise	Visual supported expression. Discussion, group work, question-answer method
8	Midterm	Writing
9	Hormonal Adaptations in Exercise, Diabetes and Exercise, Obesity and Exercise	Visual supported expression. Discussion, group work, question-answer method
10	Exercise Performance and Environmental Factors	Visual supported expression. Discussion, group work, question-answer method
11	Energy expenditure on rest and physical activity	Visual supported expression. Discussion, group work, question-answer method
12	Personal Differences and Measurement of Energy Capacities	Visual supported expression. Discussion, group work, question-answer method
13	Post-Exercise Recovery	Visual supported expression. Discussion, group work, question-answer method
14	Aerobic and Anaerobic Power Training	Visual supported expression. Discussion, group work, question-answer method
15	Aging and Exercise	Visual supported expression. Discussion, group work, question-answer method
16	Final Exam	Writing

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Exercise Physiology: Energy, Nutrition, and Human Performance Fifth Edition William D. McArdle BS M.Ed PhD (Author), Frank I. Katch Frank I. Katch (Author)		
2	ACSM's Guidelines for Exercise Testing and Prescription. 7th ed. Philadelphia: Lippincott Williams & Wilkins, 2009.		

Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	It defines the acute and chronic responses of the heart, circulatory and respiratory systems to exhalation.	2,13	1,2
2	It describes the acute and chronic responses of the musculoskeletal system and nervous system to exhalation.	1,2	1,2
3	Energy transfer in the body explains energy expenditure during rest, physical activity and exercise.	1,12,13	1,2
4	It specifies the principles and basic concepts of anaerobic and aerobic exercise training.	1,2,10	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

#	Type of Work	Quantity	Time	Work
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			(Hour)	Load
1	Course Duration	14	2	28
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	1	14
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	6	6
8	Midterm Exam	1	1	1
9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	0	0	0
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	10	10
16	Final Exam	1	1	1
				60