AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
PHYSICAL EDUCATION AND SPORTS
PHYSICAL EDUCATION AND SPORTS
PHYSICAL EDUCATION AND SPORTS MASTER
COURSE INFORMATION FORM

Course Title	Exercise Physiology								
Course Code	BSÖ575		Couse Level		Second Cycle (Master's Degree)				
ECTS Credit	7	Workload	176 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Objectives of the course are to understand the motor unit and muscular power and strength connections and teaching examples of exercise for improving muscular power and strength, endocrine control of physical activity, physiological basis of stretching and plyometric exercises and applications, conceptions of VO2max, aerobic and anaerobic threshold, and physiologies of speed sports, marathon, swimming, football and wrestling, and also analyzing and studying related journals								
Course Content	Conception of motor unit and examples of exercise for improving muscular power and strength, endocrine system in exercise, physiology and application of stretching and plyometric exercises, metabolic basis of endurance improvement, speed sports, marathon, swimming, football and wrestling physiology								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study								
Name of Lecturer(s)	Lec. Esin ERGİN								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Günay M, Cicioğlu İ. Spor Fizyolojisi, Gazi Kitabevi, Ankara, 2001 Ergen E. Egzersiz Fizyolojisi, Nobel Yayınevi, Ankara, 2002 Sönmez G.T. Egzersiz ve Spor Fizyolojisi, Ata Ofset Matbaacılık, Bolu, 2002 Akgün N. Egzersiz ve Spor Fizyolojisi (1. ve 2. cilt), İzmir, 1994 Wilmore J.H, Costill D.L. Physiology of Sport and Exercise, Human Kinetics, USA, 1994 McArdle WD, Katch FI, Katch VL. Exercise Physiology, Lea&Febiger, USA, 1991 Australian Sports Commission (Editor: CJ. Gore), Pysiological Tests for Elite Athletes, Human Kinetics, USA, 2000 Turkish and Foreign Scientific Journals

Week	Weekly Detailed Course Contents	
1	Theoretical	the motor unit and muscular power and strength connections, conceptions of muscle single twitches, wave summation, motor unit summation, muscle (fiber) length and force connection, analyzing and studying related scientific journals
2	Theoretical	Using appropriate load, sets, moving angle, moving speed in exercises aimed at improving power and strength, analyzing and studying related scientific journals
3	Theoretical	Endocrine system; endocrine glands, functions of hormones, analyzing and studying related scientific journals
4	Theoretical	Hormones and functions during exercise, analyzing and studying related scientific journals
5	Theoretical	Physiological basis of stretching, classes, application purposes and principles, analyzing and studying related scientific journals
6	Theoretical	Physiological basis of plyometric for improving power, classes, application purposes and principles, analyzing and studying related scientific journals
7	Theoretical	Application drills of stretching and plyometric exercises for all body, analyzing and studying related scientific journals
8	Intermediate Exam	Intermediate exam
9	Theoretical	Maximal oxygen conception capacity (VO2max) and endurance performance connection, differences of oxygen conception and maximal oxygen conception capacity, effective factors on VO2max, calculating training load with formula of Karvonen heart rate reserve, analyzing and studying related scientific journals
10	Theoretical	Metabolic and physiological basis of endurance improvement; conceptions of aerobic threshold, anaerobic threshold, lactic acid tolerance and movement economy, their training properties and metabolic effects of regular training, analyzing and studying related scientific journals
11	Theoretical	Marathon physiology; physical and physiological properties of athletes, heat regulation in the body, analyzing and studying related scientific journals
12	Theoretical	Speed sports physiology; physical and physiological properties of athletes, 100m running analyze, oxygen dept and deficit, analyzing and studying related scientific journals

13	Theoretical	Football physiology; physical and physiological properties of athletes belong to their position in the match, football match analyze, analyzing and studying related scientific journals
14	Theoretical	Swimming physiology; physical and physiological properties of athletes, heat loss, analyzing and studying related scientific journals
15	Theoretical	Wrestling physiology; physical and physiological properties of athletes, analyzing and studying related scientific journals
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	5	5	140
Individual Work	4	4	4	32
Midterm Examination	1	1	1	2
Final Examination	1	1	1	2
			Total Workload (Hours)	176
			[Total Workload (Hours) / 25*] = **ECTS**	7

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	Conception of motor unit and examples of exercise for improving muscular power and strength, endocrine system in exercise, physiology and application of stretching and plyometric exercises, metabolic basis of endurance improvement, speed sports, marathon, swimming, football and wrestling physiology
2	Explain the concept of exercise physiology, exercise and physical activity, benefits of regular exercise, and different exercise modalities
3	Explain the acute and chronic response of exercise on cardiovascular system
4	Explain the acute and chronic response of exercise on musculoskeletal system
5	Explain the effect of exercise on metabolism.

Programme Outcomes *(Physical Education and Sports Master)*

1	Uses application and problem solving skills in interdisciplinary studies.
2	Develops basic scientific knowledge and attitude appropriate to body and sport.
3	Interpret the results of test development and measurement for the development of individuals in physical education and sport.
4	Explains the scientific methods in physical education and sports.
5	o follow national and international developments in the field and maintain professional development.
6	Beden eğitimi ve spor örgütlerinin örgüt iklimi ve kültürünü tanımlar.

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	3	5	4	5	3
P2	5	4	4	4	5
P3	4	5	5	3	5
P4	5	4	3	3	5
P5	4	4	5	5	4
P6	3	5	4	3	4