



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Physiology of Exercise							
Course Code		BDB325		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Aim of this course is to objective of the course is to gain knowledge about muscle cell and muscle contraction, basic structure and function of nervous system, relationship between energy systems and sports activities, recovery from exercise, endurance sports physiology and physiological effects of endurance training, physiology of strength and effects of strength training and endocrine system and hormonal responses to exercise							
Course Content		Human Physiology, energy systems, recovery from exercise, acute and chronic responses to exercise							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

Prerequisites & Co-requisites

ECTS Requisite	90
----------------	----

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Vander,A.J., Sherman,J.H., Luciano,D.S. Human Physiology:The Mechanisms of Body Function. Third Edition,1980.
2	Emin E., Demirel H., Güner R., Turnagöl H., Başoğlu S., Zergeroğlu A.M., Ülkar B. Hazır T. (2002). Egzersiz Fizyolojisi Ders Kitabı, Editör: Emin Ergen, Nobel Yayın Dağıtım, Ankara.
3	Brooks G.A., Fahey T.D., White T.P., Baldwin K.M.(2000). Exercise Physiology, Human Bioenergetics and Its Applications, Third Edition,McGraw Hill, Boston.

Week	Weekly Detailed Course Contents	
1	Theoretical	The Concept of life, Chemical constituents of cells
2	Theoretical	General cell biology, Nervous cell, Basic structure and function
3	Theoretical	Nervous system, Basic structure and function Muscle Cell, Basic structure and function, Molecular mechanism of contraction
4	Theoretical	Energy Concept, Metabolism, Energy Systems
5	Theoretical	Relationship between Energy Systems and sports activities, Fuels of muscle during exercise
6	Theoretical	Recovery from Exercise
7	Theoretical	Neuro-muscular Concepts / Relationship between Muscle Fiber Types and Sports Activities / Types of muscle contraction, Neural Control of Muscle
8	Intermediate Exam	Midterm Exam
9	Theoretical	The basic structure and functions of the respiratory and circulatory systems
10	Theoretical	Respiratory and circulatory System and Exercise
11	Theoretical	Endurance Sports Physiology Maximal oxygen consumption, Anaerobic Threshold Concept
12	Theoretical	Physiological Effects of Strength and Endurance Exercises
13	Theoretical	Endocrine System and Hormonal responses during exercise
14	Theoretical	Evaluation of Anaerobic Power and Capacity
15	Final Exam	Final Exam



Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	4	2	78
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	At the end of this course, the student knows the structure of the nerve and muscle cells. Explains the structure and functions of the nervous system.
2	Explains the molecular mechanism of muscle contraction
3	Know, practice and interpret basic laboratory tests.
4	Know the hormonal responses that occur during exercise.
5	Knows the chronic adaptations that occur in regular exercises.
6	They explain the acute harmonies that occur in exercise.
7	Know post-exercise physiology.
8	Explains the relationship between energy systems and exercise.

Programme Outcomes (Nutrition and Dietetics)

1	Assess, apply and evaluate the accuracy, reliability and validity of basic knowledge and evidence based current scientific developments on nutrition and dietetics.
2	Assess scientifically the energy and nutrients need of individuals and develop nutrition plans and programs for the clients according to the principles of adequate and balanced nutrition and assessment of energy and nutrient requirements
3	Develop food and nutrition plans and policies for the prevention and promotion of healthy lifestyle applying the methods of nutritional assessment for the population.
4	Assess the nutritional status of the patients, evaluate the clinical symptoms, plan and apply individualized medical nutrition therapy for the patients.
5	Evaluate the factors affecting the quality of food consumed by the individuals and populations from production to consumption and implement the legal standards and legislations on food safety and food security.
6	Consider, interpret and apply the basic scientific knowledge on nutrition and dietetics especially have skills on critical thinking, problem solving and decision making and use effectively the appropriate current technologies and computer, demonstrate skills in preparing research manuscripts, project proposals, collecting and verifying data and writing report.
7	Assess, evaluate and interpret the nutritional status of the individuals and population groups using current knowledge, develop preventive measures, apply medical nutrition therapy, demonstrate active participation, teamwork and contributions with national and international stakeholders in health and social areas, in terms of ethical principles.
8	Plan menus in the institutional food service systems depending on the energy and nutrient requirements of target groups in the scope of nutrition and dietetic principles, take care of food safety in all settings from purchase of food to service, apply appropriate service using technological developments.
9	Develop and use effective strategies for the education, counseling and encouragement of individuals and population groups to facilitate behavior change and choose healthy and safety foods, prepare and update the related educational materials.
10	Apply laboratory work on product development, food analysis and related factors effecting food quality and interpret the results and evaluate them according to the legal arrangements.
11	Plan, manage, evaluate, monitor and report researches and programs to educate and increase and improve the knowledge and awareness of individuals and population groups on healthy nutrition during all lifecycle period, and lead such activities, support and take role in the preparation and implementation of national and international food and nutrition plans and policies.
12	Work and perform duties in the scope of occupational responsibilities and ethical principles, understand the importance of lifelong learning, follow the latest developments (innovations) in science, technology and health, demonstrate professional attributes for the enhancement of nutrition and dietetics profession.
13	Use, apply, discuss and share scientific and evidence based knowledge in nutrition and dietetics practice with team and team members, develop and demonstrate effective skills using oral, print, visual methods in communicating and expressing thoughts and ideas, communicate with all stakeholders within ethical principles. Develop and demonstrate effective communications skills using oral, print, visual, electronic and mass media methods
14	Plan, apply, monitor and evaluate individualized medical nutrition therapy within interdisciplinary approaches, considering the sociocultural, economical status of patients in various age groups and also contribute to clinical researches.

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

	L1	L2	L3	L4	L5	L6	L7	L8
P1	2	2	4	3	4	4	3	4
P2	3	3	2	3	4	4	3	4



P3	3	3	3	2	4	2	2	2
P4	4	5	3	4	2	3	4	3
P5	2	2	3	2	3	3	2	3
P6	3	4	2	3	3	3	3	3
P7	3	2	4	2	3	2	2	2
P8	2	3	2	2	2	4	4	4
P9	4	3	3	2	4	2	2	2
P10	2	2	2	3	2	3	3	3
P11	3	4	4	4	3	2	2	2
P12	2	2	2	2	2	4	2	2
P13	4	3	3	3	4	2	4	3
P14	2	3	4	2	2	3	2	2

