



AYDIN ADNAN MENDERES UNIVERSITY
AYDIN VOCATIONAL SCHOOL OF HEALTH SERVICES
MEDICAL SERVICES AND TECHNIQUES
MEDICAL LABORATORY TECHNIQUES
COURSE INFORMATION FORM

Course Title	Evolution								
Course Code	ÇS309			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	1. To inform about earth's formation and the formation of the lives on earth, also about Darwin's evolution theory and different opinions on this issue. 2. To be presented the factors that influence the formation of new species and the evidence of the evolutionary changes. 3. To inform about the issues that the works are done in the today's evolutionary genetics field how it affects / can affect.								
Course Content	Definition of the Evolution, historical development and change of this concept. Darwin's theory of evolution, the new synthesis theory. Inorganic and organic evolution. Evidences that are supporting to the evolution. Speciation and speciation models. Cultural evolution and human evolution.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case Study, Individual Study								
Name of Lecturer(s)	Lec. Sevil ÖZCAN								

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Evolution (2008) Douglas J. Futuyma (Trans. Aykut Kence, A. Nihat Bozcuk), Palme Publ.
2	Basic Rules of The Life Volume.1 / Part.1 (2004) Ali Demirsoy, Meteksan
3	Heredity and Evolution (2007) Ali Demirsoy, Meteksan

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition of the evolution, and development and history of evolution concept.
2	Theoretical	Darwin's evolution theory and different opinions related to formation of the living organisms on earth.
3	Theoretical	Inorganic evolution, the opinions related to the formation of the solar system and Earth.
4	Theoretical	Organic evolution.
5	Theoretical	The crude material of evolution (mutation, recombination). The mechanisms that providing evolution (such as natural selection, selection based on the ability to reproduction, isolation, genetic drift).
6	Theoretical	The evidences that support to the evolution.
7	Theoretical	The evidences that support to the evolution.
8	Theoretical	Midterm
9	Theoretical	Models of the speciations.
10	Theoretical	Compliance, progressive evolution, parallel evolution, narrowing evolution. Pre-adaptation and some examples for important adaptation types.
11	Theoretical	Cladogenesis, Anagenesis and some species concepts. The situations that cause speciation by preventing the gene flowing.
12	Theoretical	In the context of the life- tree, monitoring the evolutionary path which is from the common ancestor of all living to Homo sapiens, and monitoring of the bifurcations due to evolution.
13	Theoretical	Evolution of the mitosis.
14	Theoretical	Cultural evolution.
15	Theoretical	The studies are done nowadays, and their importance for evolution

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28



Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
Total Workload (Hours)				50
[Total Workload (Hours) / 25*] = ECTS				2

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Knows that organic and inorganic evolution.
2	Knows that mutations can occur in living organisms depending on the living conditions, and consequently knows that evolutionary changes can occur.
3	Knows that different theories about the formation of the living organisms.
4	Knows the basic evolutionary concepts such as mutation, variation and modification.
5	Knows different views about the formation of living things on earth.

Programme Outcomes (Medical Laboratory Techniques)

1	To be able to have sufficient back ground in medical laboratory techniques and medical laboratory branches (biochemistry, microbiology, parasitology, sitogenetik etc.); the ability to use theoretical and practical knowledge in these fields.
2	To be able to have the basic theoretical and practical knowledge and other resources have been supported applications and tools based on secondary-level qualifications gained in the field of Medical Laboratory Techniques Program to-date text books containing formations
3	To be able to have basic knowledge about structure and function of systems in human, to analyse these data on tissue, cell and diseases.
4	To be able to analyse the medical samples necessary for physicians by using tools, equipment and techniques at the diagnostic and the therapeutic laboratories of health agencies and evaluate the data.
5	To be able to use the medical laboratory tools and equipments according to rules and techniques, and make controls and maintenance of them
6	To be able to perform basic tests of related different medical laboratories, prepare solutions.
7	To be able to perform proper sample collection and transport procedures for the medical laboratory tests from the patient.
8	To be able to perform preanalytical sample preparation procedure, prepare inspection preparations, perform disinfection and sterilization
9	To be able to interpret and evaluate data, define and analyze problems, develop solutions based on research and proofs by using acquired basic knowledge and skills with in the field.
10	To be able to have knowledge about work organization and carry out related practice in medical laboratories
11	To be able to carry out laboratory safety protocols, take individual safety precaution and create safe laboratory environment.
12	To be able to gain the ability to apply by viewing and evaluating the processes related to his/her fields in public and private sector.
13	To be able to gain the awareness of the necessity of life long learning, ability to follow developments in science and technology and self-renewal.
14	To be able to help laboratory experts and medical scientists for their researches
15	To be able to be aware of individual and public health, environmental protection and job security issues, understanding the basic level of the relationship.
16	To be able to grasp principles of Atatürk and their evolutions, to ensure national, ethical, spiritual and cultural values, to adopt to universal and contemporary developments
17	To be able to communicate efficiently for medical service and speak Turkish efficiently.
18	To be able to communicate in English at basic level, utilize foreign language on occupational practice

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	1	1	1	1	1
P2	1	1	1	1	1
P3	4	4	4	4	4
P4	1	1	1	1	1
P5	1	1	1	1	1
P6	1	1	1	1	1
P7	1	1	1	1	1
P8	1	1	1	1	1
P9	3	3	3	3	3
P10	1	1	1	1	1



P11	1	1	1	1	1
P12	1	1	1	1	1
P13	2	2	2	2	2
P14	2	2	2	2	2
P15	3	3	3	3	3
P16	4	4	4	4	4
P17	3	3	3	3	3
P18	4	4	4	4	4

