



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

Course Title	Basic Topics In Biology I								
Course Code	ÇS006			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To inform the students who are educated in the health field about the basic biology topics such as organic compounds, cell division, substance transition.								
Course Content	Distinction between viability – inanimate, organic and inorganic molecules that form the structure of living cells and organelles, substances through the membrane and metabolism, cell division (types, seen cells and varieties, etc.).								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case Study, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Genetic (2003) William S. Klug & Michael R. Cummings (Trans. Prof. Cihan Öner), Palme Publishing
2	Basic Rules of Life Volume.1 / Part.1 (2004) Ali Demirsoy, Meteksan
3	Biology (2000) William T. Keeton, James L. Gould & Carol Grant Gould (Trans. Prof. Ali Demirsoy, Prof. İsmail Türkan & Prof. Ertunç Gündüz) Palme publishing

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition of Biology, related science branches and its working areas.
2	Theoretical	Differences between the live and lifeless.
3	Theoretical	Basic molecules involved in the structure of living things (inorganic).
4	Theoretical	Basic molecules involved in the structure of living things (organic).
5	Theoretical	Basic molecules involved in the structure of living things (organic).
6	Theoretical	Cell theory, cell variety and structure of the cell.
7	Theoretical	Midterm
8	Theoretical	Structure of the cell membrane and substances through the membrane.
9	Theoretical	Endoplasmic reticulum, Lysosome and Golgi apparatus.
10	Theoretical	Centrosome, Ribosome, Vacuole, Peroxisome.
11	Theoretical	Mitochondria, plastids and endosymbiosis theory.
12	Theoretical	The cell nucleus and its' role in the cell division, and cell cycle.
13	Theoretical	Bacterial Asexual reproduction (Binary fission) and mitosis.
14	Theoretical	Meiosis cell division.
15	Theoretical	Metabolism and Homeostasis.

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Individual Work	3	5	2	21
Midterm Examination	1	10	1	11
Final Examination	1	14	1	15
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	Knows the molecules that make up the structure of living things.
2	Knows the structure, division, feature and various of the cells.
3	Knows the current basic rules of the substance transition in the cell membrane and the metabolism.
4	Knows the basic Latin concepts.
5	Knows and defines to the cell divisions.

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 there 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	4	4	4	4	4
P2	3	3	3	3	3
P3	5	5	5	5	5
P4	3	3	3	3	3
P5	2	2	2	2	2
P6	2	2	2	2	2
P7	5	5	5	5	5
P8	2	2	2	2	2
P9	4	4	4	4	4
P10	1	1	1	1	1
P11	3	3	3	3	3
P12	1	1	1	1	1
P13	4	4	4	4	4
P14	3	3	3	3	3
P15	3	3	3	3	3
P16	3	3	3	3	3
P17	4	4	4	4	4



P18	4	4	4	4	4
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