



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

Course Title	Clinical Biochemistry I								
Course Code	TL213	Course Level			Short Cycle (Associate's Degree)				
ECTS Credit	3	Workload	76 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	Providing competencies concerning clinical biochemistry analysis and tests								
Course Content	Making tests for water and electrolyte metabolism, Making tests for acid-base balance, Making tests for diseases of carbohydrate metabolism, Making tests for diseases of lipid metabolism, Making tests for protein metabolism, Making tests for liver function, Making tests for heart function, Making tests for kidney function, Making tests for the gastrointestinal system functions, Making male urogenital system-specific tests Making tests related to bone metabolism, Determination of tumor markers, Making analysis of body fluids								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study								
Name of Lecturer(s)	Lec. Mustafa YILMAZ								

#### Prerequisites & Co-requisites

Co-requisite	TL215
--------------	-------

#### Assessment Methods and Criteria

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

#### Recommended or Required Reading

1	Klinik Biyokimya, Bahattin Adam, Nobel Tıp Kitabevleri, 2000
2	Klinik Biyokimya Analiz Metodları, Bahattin Adam ve Yasemin Ardıçoğlu, Atlas Kitapçılık, 2002
3	Klinik Biyokimya Laboratuvarı El Kitabı, Idris Mehmetoğlu, Nobel Tıp Kitabevleri, 2007

Week	Weekly Detailed Course Contents	
1	Theoretical	Making tests for water and electrolyte metabolism
2	Theoretical	Making tests for acid-base balance
3	Theoretical	Making tests for diseases of carbohydrate metabolism
4	Theoretical	Making tests for diseases of lipid metabolism
5	Theoretical	Making tests for protein metabolism
6	Theoretical	Making tests for liver function
7	Theoretical	Making tests for heart function
8	Intermediate Exam	Midterm exam
9	Theoretical	Making tests for kidney function
10	Theoretical	Making tests for the gastrointestinal system functions
11	Theoretical	Making tests related to bone metabolism
12	Theoretical	Making male urogenital system-specific tests
13	Theoretical	Monitoring of therapeutic drug level
14	Theoretical	Determination of tumor markers
15	Theoretical	Making analysis of body fluids

#### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70
Midterm Examination	1	2	1	3



Final Examination	1	2	1	3
	Total Workload (Hours)			76
	[Total Workload (Hours) / 25*] = ECTS			3
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

1	Making tests for water and electrolyte metabolism
2	Making tests for acid-base balance
3	Making tests for diseases of carbohydrate metabolism
4	Making tests for diseases of lipid metabolism
5	Making tests for protein metabolism
6	Making tests for liver function
7	Making tests for heart function
8	Making tests for kidney function
9	Making tests for the gastrointestinal system functions
10	Making tests related to bone metabolism
11	Making male urogenital system-specific tests
12	Determination of tumor markers
13	Making analysis of body fluids

### Programme Outcomes (Medical Laboratory Techniques)

1	To be able to have sufficient background 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	L6	L7	L8	L9	L10	L11	L12	L13
P1	5	5	5	5	5	5	5	5	5	5	5	5	5
P2	5	5	5	5	5	5	5	5	5	5	5	5	5
P4	5	5	5	5	5	5	5	5	5	5	5	5	5
P5	5	5	5	5	5	5	5	5	5	5	5	5	5



P6	5	5	5	5	5	5	5	5	5	5	5	5	5
P7	5	5	5	5	5	5	5	5	5	5	5	5	5
P10	5	5	5	5	5	5	5	5	5	5	5	5	5
P12	5	5	5	5	5	5	5	5	5	5	5	5	5
P14	5	5	5	5	5	5	5	5	5	5	5	5	5

