



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

Course Title	Blood Biochemistry								
Course Code	TL306	Course Level			Short Cycle (Associate's Degree)				
ECTS Credit	3	Workload	76 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	Whole blood, a complete blood count (Cbc) and blood Biochemistry-related General parameters and to have knowledge about the results intended.								
Course Content	Whole blood and reference values, research methods, IMI and causes abnormal status Blood biochemistry reference values, research methods, IMI and causes abnormal status								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), 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	Klinik Biyokimya Laboratuvarı El Kitabı, Idris Mehmetoğlu, Nobel Tıp Kitabevleri, 2007
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Week	Weekly Detailed Course Contents	
1	Theoretical	Blood, composition and functions and General blood tests
2	Theoretical	Whole blood (Total blood), blood samples must be taken of
3	Theoretical	Blood count (Hemogram) reference values, analysis methods, pathologies
4	Theoretical	Sedimentation reference values, analysis methods, pathologies,
5	Theoretical	The Hemoglobin reference values, the hemotocrit., analysis methods, pathologies
6	Theoretical	Bleeding clotting factors.APTT,ACT,PT,APZ reference values, analysis methods, pathologies
7	Theoretical	Blood Enzymes (liver, kidney, heart), reference values, analysis methods, pathologies
8	Intermediate Exam	MIDTERM EXAM
9	Theoretical	Lipitler and analysis of reference values, analysis methods, pathologies
10	Theoretical	Determination of blood Groups and blood transfusions before testing
11	Theoretical	Hormone analysis reference values, analysis methods, pathologies
12	Theoretical	Acute phase proteins are reference values, analysis methods, pathologies
13	Theoretical	Hepatitis markers and interpretation
14	Theoretical	Tumor markers and interpretation
15	Theoretical	Other body fluids and the reference values, analysis methods, pathologies

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	2	0	5	10
Seminar	3	0	5	15
Midterm Examination	1	7	1	8
Final Examination	1	14	1	15
			Total Workload (Hours)	76
			[Total Workload (Hours) / 25*] = ECTS	3

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	The simplest level at the end of the course the students complete blood and blood biochemistry parameters must have basic knowledge about
2	Understand the basic principles of biochemistry, to recognize the remarkable points on taking the blood sample
3	May identify laboratory safety and may apply laboratory safety rules
4	Hormones the definition, classification, metabolism and the relationship between laboratory tests and disease
5	Hemoglobin-Porpyrin the definition, metabolism and the relationship between laboratory tests and disease

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, under standing 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	5	5	5	5	5
P2	5	5	5	5	5
P4	5	5	5	5	5
P5	5	5	5	5	5
P6	5	5	5	5	5
P7	5	5	5	5	5
P9	5	5	5	5	5
P10	5	5	5	5	5
P11	5	5	5	5	5
P12	5	5	5	5	5
P13	5	5	5	5	5

