



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

Course Title	Laboratory Devices and Equipment								
Course Code	TL104	Course Level			Short Cycle (Associate's Degree)				
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	Teach the information and skills to use, maintain and clean the laboratory gadgets								
Course Content	Glass and plastic materials, to make material transfer with the aid of a micropipette and the glass pipette. To weigh article, Incubation methods, Sterilization methods, To obtain laboratory water, Spectrophotometric and nephelometric methods, Turbidimetric and fluorometric methods, Flamephotometry, Automatic Autoanalyzers, Chromatographic methods, Electrophoretic methods, Tissue, blood and serum storage methods								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, 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	Lecture notes, PowerPoint presentations, medical journals and publications
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Week	Weekly Detailed Course Contents	
1	Theoretical	Glass and plastic materials, to make material transfer with the aid of a micropipette and the glass pipette. Toweigh article.
2	Theoretical	Methods of mixing the solution, cleaning of the Ph meter, glass and plastic materials,
3	Theoretical	Incubation methods
4	Theoretical	Sterilization methods
5	Theoretical	To obtain laboratory water
6	Theoretical	Precipitating fluids by means of centrifuges
7	Theoretical	To examine invisible objects-microscopic methods
8	Intermediate Exam	Midterm exam
9	Theoretical	Spectrophotometric and nephelometric methods
10	Theoretical	Turbidimetric and fluorometric methods
11	Theoretical	Flamephotometry and atomic absorption spectrometry methods
12	Theoretical	Automatic Autoanalyzers (biochemistry and hematology)
13	Theoretical	Chromatographic methods
14	Theoretical	Electrophoretic methods
15	Theoretical	Tissue, blood and serum storage methods

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	1	2	42
Midterm Examination	1	2	1	3
Final Examination	1	1	1	2
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	1. Prepare, use and clean the tools for solutions
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2	2. Make incubation
3	3. Make sterilization
4	4. Gain laboratory water
5	General characteristics of chromatographic devices
6	6. Screen the objects impossible to see with eye with a microscope
7	7. Assign matter amount by using light sources
8	8.Assign matter amount by using automatic analyser
9	9.Assign the amounts of special molecules
10	10.Preserve texture, blood, serum etc.

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,sitogenetiketc.);the ability to use theoretical and practical knowledge in these fields.
2	To be able to have the basic theoretical and practical knowledgeand 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 boks 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 rapeutic laboratories of health agencies and evaluate the data.
5	To be able to use the medical laboratoy tools and equipments according to rules and technics, 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 there volutions, to ensurenational, 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
P1	5	5	5	5	5	5	5	5	5	5
P2	5	5	5	5	5	5	5	5	5	5
P4	5	5	5	5	5	5	5	5	5	5
P5	5	5	5	5	5	5	5	5	5	5
P6	5	5	5	5	5	5	5	5	5	5
P8	5	4	5	4	4	4	4	4	4	4
P9	5	5	5	5	5	5	5	5	5	5
P11	5	5	5	5	5	5	5	5	5	5
P14	5	5	5	5	5	5	5	5	5	5

