



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

Course Title	Microbiology I								
Course Code	TL106	Course Level			Short Cycle (Associate's Degree)				
ECTS Credit	2	Workload	54 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To provide information about the general characteristics of microorganism groups and their useful and harmful effects.								
Course Content	Disinfection methods, Sterilization methods, Classification of microorganisms, structures, reproductive and metabolism.								
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	Bilgehan H. Temel Mikrobiyoloji ve Bağışıklık Bilimi 8. Baskı. Fakülteler Kitabevi, Bornova, 1996
2	Serter N. Mikrobiyoloji. T.C. Anadolu Üniversitesi Yayınları No:490, Eskişehir, 1991.

Week	Weekly Detailed Course Contents	
1	Theoretical	Disinfection, antisepsis and sterilization concepts, methods of disinfection
2	Theoretical	The history and definition of microbiology
3	Theoretical	Microbial organisms: Algae and protozoa
4	Theoretical	Microbial organisms: Fungus
5	Theoretical	The structure of bacteria, the metabolism
6	Theoretical	Growth of bacteria, nutrient needs,
7	Theoretical	Media
8	Intermediate Exam	Midterm exam
9	Theoretical	Microbial metabolism: Energy, respiration and glycolysis
10	Theoretical	Microbial metabolism: TCA, fermentation
11	Theoretical	Microbial metabolism: Enzymes
12	Theoretical	Bacterial Genetics: transformation, conjugation, transduction
13	Theoretical	Bacterial genetics: mutations and mutagens
14	Theoretical	Antibiotics and antibiotic resistance
15	Theoretical	Viruses

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Individual Work	5	0	1	5
Midterm Examination	1	2	1	3
Final Examination	1	2	2	4
Total Workload (Hours)				54
[Total Workload (Hours) / 25*] = ECTS				2
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes	
1	To learn disinfection and sterilization methods
2	To learn the groups of microorganisms



3	Understanding the metabolic and genetic functions of microorganisms
4	Be aware of the importance of using antibiotics
5	Microbiological testing methods utilized in diagnosis of knowing
6	To know the culture and identification methods for bacteria and fungi
7	Virus infections, knowledge of microbiological diagnostic methods

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	L6	L7
P1	5	5	5	5	5	5	5
P2	4	4	5	5	5	5	5
P3	4	4	4	4	4	4	4
P4	4	4	4	4	4	4	4
P5	4	4	4	4	4	4	4
P6	5	5	5	5	5	5	5
P7	5	5	5	5	5	5	5
P8	5	5	5	5	5	5	5
P9	5	5	5	5	5	5	5
P10	3	3	3	3	3	3	3
P11	4	4	4	4	4	4	4
P12	3	3	3	3	3	3	3
P13	4	4	4	4	4	4	4
P14	3	3	3	3	3	3	3
P15	5	5	5	5	5	5	5
P18	5	5	5	5	5	5	5

