

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
ADVANCED MICROBIOLOGY LABORATORY ROTATION-II	MKBD1267870	Spring Semester	0+8	4	15
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	Third Cycle (Doctorate Degree)				
Course Type	Required				
Course Coordinator	Assist.Prof. Özlem GÜVEN				
Name of Lecturer(s)	Assoc.Prof. Ayşe İSTANBULLU TOSUN, Assist.Prof. Özlem GÜVEN				
Assistant(s)					
Aim	Identification of fungi, parasites and viruses, explanation of laboratory methods used and application of techniques				
Course Content	This course contains; Working principles, clinical samples and techniques used in the mycology laboratory, Methods used in the identification of dermatophytes - I, Methods used in the identification of dermatophytes - II, Methods used in the identification of invasive fungi and current research topics, Antifungal sensitivity tests and interpretation, Working principles, clinical samples and techniques used in the parasitology laboratory, Methods used in the identification of intestinal parasites and current research topics, Methods used in the identification of genitourinary parasites and current research topics, Methods used in the identification of blood and tissue parasites and current research topics, Immunology and molecular biology methods used in mycology and parasitology laboratories, Working principles, clinical samples and techniques used in the virology laboratory, Virus culture techniques and culture-based tests, Immunology methods used in virology (rapid serological tests, DFA, IFA, ELISA, WB, etc.) and interpretation of the results, Molecular biology methods used in virology (PCR, qPCR, RT-qPCR, LAMP assay, sequencing, mutation detection, etc.) and interpretation of the results; Tests to detect antiviral resistance, Current diagnostic methods in virology.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
Explains and applies the methods used in the detection and identification of fungi.			10, 16, 17, 9	A, H	
Parazitlerin saptanmasında ve tanımlanmasında kullanılan yöntemleri açıklar ve uygular.			10, 16, 17, 9	A, H	
Explains and applies the methods used in the detection and identification of viruses.			10, 16, 17, 9	A	
Explains and applies the methods used in detecting antimicrobial resistance.			10, 16, 17, 9	A, H	
Teaching Methods	10: Discussion Method, 16: Question - Answer Technique, 17: Experimental Technique, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, H: Performance Task				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Working principles, clinical samples and techniques used in the mycology laboratory				
2	Methods used in the identification of dermatophytes - I				
3	Methods used in the identification of dermatophytes - II				
4	Methods used in the identification of invasive fungi and current research topics				
4	Antifungal sensitivity tests and interpretation				
5	Working principles, clinical samples and techniques used in the parasitology laboratory				
6	Methods used in the identification of intestinal parasites and current research topics				
7	Methods used in the identification of genitourinary parasites and current research topics				
8	Methods used in the identification of blood and tissue parasites and current research topics				
9	Immunology and molecular biology methods used in mycology and parasitology laboratories				
10	Working principles, clinical samples and techniques used in the virology laboratory				
11	Virus culture techniques and culture-based tests				
12	Immunology methods used in virology (rapid serological tests, DFA, IFA, ELISA, WB, etc.) and interpretation of the results				
13	Molecular biology methods used in virology (PCR, qPCR, RT-qPCR, LAMP assay, sequencing, mutation detection, etc.) and interpretation of the results; Tests to detect antiviral resistance				
14	Current diagnostic methods in virology				
Evaluation Methods		Weight(%)			
Midterm Exam		50			
General Exam		50			

Resources

Koneman's Color Atlas And Textbook of Diagnostic Microbiology. 7th ed. Jones & Bartlett Learning; 2016.