

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
ADVANCED MICROBIOLOGY LABORATORY ROTATION-I	MKBD1167860	Fall 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 bacteria and explanation of laboratory methods used in bacteriology studies and application of techniques				
Course Content	This course contains; Biosafety and risky bacteria in the microbiology laboratory,Culture-based bacteriological analysis of clinical samples,Immunological methods used in bacteriology,Molecular biology methods used in bacteriology,Antibiotic sensitivity tests and resistance analysis,Methods used in the identification of Gram-positive cocci and current research topics,Methods used in the identification of Gram-negative cocci and current research topics,Methods used in the identification of Gram-positive bacilli and current research topics,Methods used in the identification of gram-negative bacilli and current research topics - Enterobacterales,Methods used in the identification of gram-negative bacilli and current research topics - Non-fermentative bacteria,Methods and current research topics used in the identification of acid-fast bacteria and spirochetes,Methods and current research topics used in the identification of bacteria without cell walls and obligate intracellular bacteria,Methods used in the identification of anaerobic bacteria and current research topics,Automated methods, MALDI-TOF, rapid diagnostic tests and current technologies.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
Explains and applies methods used in the identification of bacteria			10, 16, 17, 9	A, H	
Explains current diagnostic methods used in the field of bacteriology.			10, 16, 17, 9	A	
Applies bacteriology laboratory tests and interprets the results			10, 16, 17, 9	A, H	
Applies tests to detect antibiotic resistance and interprets the results			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	Biosafety and risky bacteria in the microbiology laboratory				
2	Culture-based bacteriological analysis of clinical samples				
3	Immunological methods used in bacteriology				
4	Molecular biology methods used in bacteriology				
5	Antibiotic sensitivity tests and resistance analysis				
6	Methods used in the identification of Gram-positive cocci and current research topics				
7	Methods used in the identification of Gram-negative cocci and current research topics				
8	Methods used in the identification of Gram-positive bacilli and current research topics				
9	Methods used in the identification of gram-negative bacilli and current research topics - Enterobacterales				
10	Methods used in the identification of gram-negative bacilli and current research topics - Non-fermentative bacteria				
11	Methods and current research topics used in the identification of acid-fast bacteria and spirochetes				
12	Methods and current research topics used in the identification of bacteria without cell walls and obligate intracellular bacteria				
13	Methods used in the identification of anaerobic bacteria and current research topics				
14	Automated methods, MALDI-TOF, rapid diagnostic tests and current technologies				
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.					