

Course Title	Code	Semester	Theoretical (hours/week)	Practice (hours/week)	Laboratory (hours/week)	ECTS
Bacterial Genetics	MIK 516	1./2. Semester	1	0	0	5
Prerequisites	None					
Course Language	Turkish					
Course Type	Elective					
Teaching Methods	Lecture, question- answer, demonstration, practice-exercise					
Instructor(s)						
Course Objective	The aim of this course is to learn genetic structure and functions of bacteria.					
Course Learning Outcomes	1- Learns the prokaryotic genome structure. 2- Explains the mechanism of genetic material transfer between bacteria. 3- Understands the importance of bacterial gene transfer.					
References	1- Molecular Genetics of Bacteria (4th Edition). J. W. Dale, S.F.Park,(2004). 2- Molecular Microbiology, Diagnostic Principles and Practice. (Eds: Persing DH, Tenover FC, Versalovic J, Tang Y, Unger ER, Relman DA, White TJ). ASM Press, Washington DC, 2004.					

WEEKLY COURSE TOPICS

Weeks	DISCUSSION TOPICS TO BE PROCESSED
1.	Basic Terms of Genetics
2.	Structure of DNA
3.	Structure of RNA
4.	Genetic Properties of Bacteria
5.	Plasmids
6.	Bacteriophages
7.	Transposons
8.	Midterm exam
9.	Transfer of Genetic Material in Bacteria
10.	Transfer of Genetic Material in Bacteria
11.	Transfer of Genetic Material in Bacteria
12.	Mutation, Types and Results
13.	Gene Cloning in Bacteria
14.	Genetics and Pathogenicity
15.	Final Exam

ECTS / WORK LOAD TABLE

Activities	Number	Duration	Total Work Load
Course	14	1	14
Laboratory			
Practice			
Field Study			
Outclass course work hours (Self working / Teamwork / Preliminary work)	14	5	70
Presentations (Video preparation / Poster preparation / Oral presentation / Focus group discussion / Applying questionnaire/ Observation and report writing)	4	6	24
Seminars			
Project			
Case study			
Role playing, dramatization			
Preparing and criticizing article			
Semester midterm exams	1	7	7
Semester final exams	1	10	10
Total Work Load (hour) / 25(s)	125/25		
ECTS	5		

EVALUATION SYSTEM

Midterm Studies	Number	Contribution
Midterm exam	1	%30
Quiz		
Laboratory		
Practice		
Field Study		
Specific practical training (If exists)		
Homework assignment		
Presentation and seminar	4	%20
Projects		
Other evaluation methods		
Total of Midterm Studies		%50
Final Studies		
Final	1	%50
Homework assignment		
Practice		
Laboratory		
Total of Final Studies		%50
Contribution of midterm studies to course grade		%50
Contribution of final studies to course grade		%50
Total Grade		100

RELATIONSHIPS BETWEEN COURSE LEARNING OUTCOMES AND PROGRAM QUALIFICATIONS

	Program Qualifications	Learning Outcomes		
		LO1	LO2	LO3
1.	Gains scientific knowledge and skills at the level of expertise in the field of medical microbiology.	5	5	5
2.	Uses the research resources adequately to reach scientific knowledge.	5	5	5
3.	Reaches new information in the field of medical microbiology and synthesizes the information obtained from different sources and evaluates it from a scientific point of view.	5	5	5
4.	Gains awareness about the ethics of scientific work and fulfills ethical responsibilities.	3	3	3
5.	Learns and applies the basic principles of research methods.	4	4	3
6.	Describes the morphological and physiological characteristics of microorganisms.	5	5	4
7.	Works in the laboratory in accordance with biosafety rules.	3	3	3
8.	Have knowledge about the devices and tools that are specific to the field and use them.	2	2	2
9.	Learns and applies laboratory techniques used in the field of medical microbiology.	2	2	2
10.	Knows and applies the basic methods for microbiological examination.	2	2	2
11.	Conducts studies related to the field individually or in a team. Performs the tasks given in scientific studies.	4	4	4
12.	Plans and conducts scientific research by using the knowledge learned in the field of medical microbiology, analyzes and evaluates the results.	5	5	5
13.	Gains the ability to present the information obtained or information related to his / her studies orally and visually.	5	5	5
14.	Follows scientific developments and current studies.	5	5	5
15.	Gains the ability of lifelong learning.	5	5	5

Contribution to the level of proficiency: 1: Low 2: Low/Moderate 3: Moderate 4: High 5: Excellent