

DEPARTMENT OF MOLECULAR BIOTECHNOLOGY COURSE SYLLABUS

Course Details									
Code				Aca	Academic Year		Semester		
MBT204					2		4		
Title				Т	Α	L	ECTS		
Microbiology I				2	1	2	6		
Language	German								
Level	Undergraduate	luate X Graduate				Postgra	duate		
Department / Program	Molecular Biotechnology								
Forms of Teaching and Learning	Face-to-face								
Course Type	Compulsory		Ele	ective					
Objectives	Having an understanding of diversity and physiology of microorganisms.								
Content	Milestones in microbiology Microscopy and cell structure Cell functions and applications Microbial Diversity Algae and fungi Growth, nutrition and cultivation Viruses Infection Biology Basics of Immunobiology Phage therapy Molecular Detection Systems Evolution of microorganisms								
Prerequisites	None								
Coordinator	Prof. Dr. Michael Steinert								
Lecturer(s)	Prof. Dr. Michael Steinert								
Assistant(s)	Res. Asst. Ogün Morkoç, Res. Asst. Şeyma İş								
Work Placement	None								
Recommended or Required R	eading								
Books / Lecture Notes	Allgemeine Mikrobiologie, Georg Fuchs, Georg-Thieme Verlag Lecture notes								
Other Sources									
Additional Course Material									
Documents									
Assignments									
Exams									



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Course Compos	sition				
Mathematics un Sciences	d Basic		%		
Engineering			%		
Engineering Desi	ign		%		
Social Sciences			%		
Educational Scie	nces		%		
Natural Sciences		100	%		
Health Sciences			%		
Expert Knowledg	ge	100	%		
Assessment					
Activ	ity	Cou	Percentage (%)		
Midterm Exam		1	35		
Quiz		1	15		
Assignments	0			0	
Attendance		0	0		
Recitations		0	0		
Projects		0	0		
Final Exam				50	
			Total	100	
ECTS Points and	d Work Load		Total	100	
ECTS Points and Activ	d Work Load ity	Count	Total Duration	100 Work Load (Hours)	
ECTS Points and Activ Lectures	d Work Load ity	Count 13	Total Duration 2	100 Work Load (Hours) 26	
ECTS Points and Activ Lectures Self-Study	d Work Load ity	Count 13 13	Total Duration 2 5	100 Work Load (Hours) 26 65	
ECTS Points and Activ Lectures Self-Study Assignments	d Work Load ity	Count 13 13 4	Total Duration 2 5 2 2	100 Work Load (Hours) 26 65 8	
ECTS Points and Activ Lectures Self-Study Assignments Presentation / Se Preparation	d Work Load ity eminar	Count 13 13 4 1	Total Duration 2 5 2 10	100 Work Load (Hours) 26 65 8 8 10	
ECTS Points and Activ Lectures Self-Study Assignments Presentation / Se Preparation Midterm Exam	d Work Load ity eminar	Count 13 13 4 1 1 1 1	Total Duration 2 5 2 10 2	100 Work Load (Hours) 26 65 8 10 2	
ECTS Points and Activ Lectures Self-Study Assignments Presentation / So Preparation Midterm Exam Recitations	d Work Load ity eminar	Count 13 13 4 1 1 1 13	Total Duration 2 5 2 10 2 1	100 Work Load (Hours) 26 65 8 10 2 2 13	
ECTS Points and Activ Lectures Self-Study Assignments Presentation / Se Preparation Midterm Exam Recitations Laboratory	d Work Load ity eminar	Count 13 13 4 1 1 1 13 13 13 13 13 13 13 13 13 13 13 13 13	Total Duration 2 5 2 10 2 10 2 1 2	100 Work Load (Hours) 26 65 8 10 2 13 26	
ECTS Points and Activ Lectures Self-Study Assignments Presentation / Se Preparation Midterm Exam Recitations Laboratory Projects	d Work Load ity eminar	Count 13 13 4 1 1 1 13 13 13 -	Total Duration 2 5 2 10 2 10 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 -	100 Work Load (Hours) 26 65 8 10 2 13 26 -	
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ECTS Points and Activ Lectures Self-Study Assignments Presentation / Se Preparation Midterm Exam Recitations Laboratory Projects Final Exam	d Work Load ity eminar	Count 13 13 4 1 1 13 13 13 13 13 13 13 13 13 13 14 15 16 17 18 19 10 ECTS Point	Total Duration 2 5 2 10 2 10 2 10 2 10 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 2 2 3 3 3 4 4 5	100 Work Load (Hours) 26 65 8 10 2 10 2 13 26 - 2 13 26 - 1 2 152 6	
ECTS Points and Activ Lectures Self-Study Assignments Presentation / Se Preparation Midterm Exam Recitations Laboratory Projects Final Exam	d Work Load	Count 13 13 4 1 1 13 13 13 13 13 13 13 13 13 13 14 15 16 17 18 19 10 ECTS Point	Total Duration 2 5 2 10 2 10 2 10 2 10 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 2 2 3 3 4 5 6 7 7	100 Work Load (Hours) 26 65 8 10 2 13 26 - 2 2 13 26 - 2 152 6	
ECTS Points and Activ Lectures Self-Study Assignments Presentation / Se Preparation Midterm Exam Recitations Laboratory Projects Final Exam	d Work Load ity eminar eminar Having an und	Count 13 13 4 1 1 13 13 13 13 13 13 13 13 5 1 13 13 14 15 16 17 18 19 10 ECTS Point erstanding of diversity, physiologe	Total Duration 2 5 2 10 2 10 2 10 2 10 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 2 1 2 1 2 1 2 2 3 3 3 4 5	100 Work Load (Hours) 26 65 8 10 2 10 2 13 26 - 2 2 152 6 6	



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3	Having an understanding of the interaction between different species.							
Weekly Conter	Weekly Content							
1	Introduction to microbiology & Milestones in microbiology							
2	Microscopy ar	Microscopy and cell structure						
3	Cell functions and applications (Molecular Microbiology)							
4	Microbial Diversity							
5	Algae and fungi							
6	Growth and nutrition of microorganisms							
7	Cultivation of microorganisms							
8	Viruses							
9	Infection biology (microbiology origin)							
10	Basics of Immunobiology							
11	Phage therapy							
12	Molecular Detection Systems							
13	Evolution							
Contribution of Learning Outcomes to Program Objectives (1-5)								
	P1	P2	P3	P4	P5	P6	P7	
1	5	4	5	5		5		
2	5	4	5	5		5		
3	5	4	5	5		5		
Contribution Lev	Contribution Level1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High							
https://obs.tau.edu.tr/oibs/bologna/progLearnOutcomes.aspx?lang=en&curSunit=5707								
Compiled by:	ipiled by: Res. Asst. Şeyma İş							
Date of Compila	tion:	14.08.2023						