

DEPARTMENT OF MOLECULAR BIOTECHNOLOGY COURSE SYLLABUS

Course Details									
Code				Acade	Academic Year			Semester	
MBT367				3	3			5	
				Т	Α	L	ECTS		
Evolution				3	0	2	6		
Language	German								
Level	Undergraduate	X Graduate			Postgra			duate	
Department / Program	Molecular Biotechnology								
Forms of Teaching and Learning	Face-to-Face								
Course Type	Compulsory			Elective			X		
Objectives	Having an understand	ing of Mer	ndel and molec	ular genet	ics in a	nimal p	opulatio	ons.	
Content	 Populations and gene pools Hardy-Weinberg Equilibrium Populations not in Hardy-Weinberg equilibrium Mutation, Natural selection Genetic drift Wallace, Darwin and On the Origin of Species Models for species formation Isolation mechanism Measurement of genetic variation Protein polymorphism Evolution and genetic variation Molecular techniques in evolution research 								
Prerequisites	-								
Coordinator	Undefined								
Lecturer(s)	Undefined								
Assistant(s)									
Work Placement	-								
Recommended or Required R	eading								
Books / Lecture Notes	Evolutionsbiologie, Volker Storch, Ulrich Welsch Lecture notes								
Other Sources									
Additional Course Material									
Documents									
Assignments									
Exams									



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Course Composition				
Mathematics and Basic Sciences		%		
Engineering		%		
Engineering Design		%		
Social Sciences		%		
Educational Sciences		%		
Natural Sciences	100	%		
Health Sciences		%		
Expert Knowledge		%		
Assessment				
Activity	Cou	Percentage (%)		
Midterm Exam	1	20		
Quiz	0	0		
Assignments	0	0		
Attendance	0	0		
Recitations	0	0		
Projects	cts 1			
Final Exam	1	40		
	Total			
		Total	100	
ECTS Points and Work Load		Total	100	
ECTS Points and Work Load Activity	Count	Total Duration	100 Work Load (Hours)	
	Count 13			
Activity		Duration	Work Load (Hours)	
Activity Lectures Self-Study Assignments	13	Duration 5	Work Load (Hours) 65	
Activity Lectures Self-Study	13 13	Duration 5	Work Load (Hours) 65 78	
Activity Lectures Self-Study Assignments Presentation / Seminar	13 13 0	Duration 5 6 0	Work Load (Hours) 65 78 0	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation	13 13 0	Duration 5 6 0 0	Work Load (Hours) 65 78 0	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation Midterm Exam	13 13 0 0	Duration 5 6 0 0 0 10	Work Load (Hours) 65 78 0 0	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation Midterm Exam Recitations	13 13 0 0 1	Duration 5 6 0 0 10 0	Work Load (Hours) 65 78 0 0 10 0	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation Midterm Exam Recitations Laboratory	13 13 0 0 1 0 0	Duration 5 6 0 0 10 0 0	Work Load (Hours) 65 78 0 0 10 0 0	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation Midterm Exam Recitations Laboratory Projects	13 13 0 0 0 1 0 0 1 1 0 1	Duration 5 6 0 0 10 0 12	Work Load (Hours) 65 78 0 0 10 0 12	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation Midterm Exam Recitations Laboratory Projects	13 13 0 0 0 1 0 0 1 1 1 1	Duration 5 6 0 10 0 11 0 12 10	Work Load (Hours) 65 78 0 0 10 0 12 10	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation Midterm Exam Recitations Laboratory Projects	13 13 0 0 0 1 0 0 1 1 1 1	Duration 5 6 0 10 0 12 10 Total Work Load	Work Load (Hours) 65 78 0 0 10 0 12 10 175	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation Midterm Exam Recitations Laboratory Projects Final Exam Learning Outcomes	13 13 0 0 0 1 0 0 1 1 1 1	Duration	Work Load (Hours) 65 78 0 0 10 0 12 10 175	
Activity Lectures Self-Study Assignments Presentation / Seminar Preparation Midterm Exam Recitations Laboratory Projects Final Exam Learning Outcomes 1 Having an unc	13 13 0 0 0 1 1 0 1 1 1 1 ECTS Point	Duration 5 6 0 0 10 0 12 10 Total Work Load Ints (Total Work Load / Hour)	Work Load (Hours) 65 78 0 0 10 0 12 10 175	



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3	Gaining knowledge about Mendel and molecular genetics						
Weekly Content							
1	Populations and gene pools						
2	Hardy-Weinberg Equilibrium						
3	Populations not in Hardy-Weinberg equilibrium						
4	Mutation, Natural selection						
5	Genetic drift						
6	Wallace, Darwin and On the Origin of Species						
7	Models for species formation						
8	Isolation mechanism						
9	Measurement of genetic variation						
10	Protein polymorphism						
11	Evolution and genetic variation						
12	Molecular techniques in evolution research						
Contribution of Learning Outcomes to Program Objectives (1-5)							
	P1	P2	Р3	P4	P5	Р6	P7
1	5	5	5	5	0	5	0
2	5	5	5	5	0	5	0
3	5	5	5	5	0	5	0
Contribution Level: 1: 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:		Research Assistant Şeyma İş					
Date of Compila	ation: 28.04.2022						