

Course Title: Gene Technologies				Code :		Institute: Faculty of Science and Literature		
						Field: Molecular Biology and Genetics		
Education and Teaching Methods							Credits	
Lecture	Application	Lab.	Project/ Field Study	Homework	Other	Total	Credit T+A+L=Credit	ECTS
28						28	2	3
Semester		Autumn/Spring		Language		Turkish/		
Course Type	Basic Scientific ☐	Scientific ☐	Compulsary Elective ☒			Social Elective ☐		
Course Objectives	The aim of the course is to give information about the gene technologies and to teach the field of areas that gene technologies are used in the present time.							
Learning Outcomes and Competencies	To learn basic concepts of gene technologies To learn the usage areas of gene technologies.							
Textbooks and/or References	Campbell&Reece (2008). Biyoloji. (Çeviri ed. E. Gündüz, A. Demirsoy, I. Türkan), Palme yayınları							
ASSESSMENT CRITERIA								
Theoretical Courses				Project Course and Graduation Study				
	If any, mark as (X)	Percent (%)		If any, mark as (X)	Percent (%)			
Midterm Exams	1	40	Midterm Exams					
Quizzes			Midterm Controls					
Homework			Term Paper					
Term Paper, Project Reports, etc.			Oral Examination					
Laboratory Work			Final Exam					
Final Exam	1	60	Other					
Other								
Week	Subjects							
1	Definition and application areas of gene technology							
2	DNA isolation, DNA truncation and restriction enzymes							
3	DNA analysis, determination of DNA and ligases							
4	RNA analysis, determination of RNA							
5	Gene cloning techniques and transfer of cloning genes I							
6	Gene cloning techniques and transfer of cloning genes II							
7	Genetic transfer techniques and model organisms							
8	GM plants and technics							
9	GM animals and technics							
10	GM microorganisms and technics							
11	Production of insulin and pharmaceutical products							
12	Bacterial and viral vaccine production techniques							
13	Risk assessment processes of GMO production and its applications-biosecurity concept							
14	Advantages and disadvantages of GMO technology							
Instructor/s	Prof.Dr.Feray KÖÇKAR,Dr. Öğr. Uyesi Hatice YILDIRIM, Dr. Öğr.Uyesi Sümeyye TÜRKOĞLU							
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