



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Genetically Modified Organism							
Course Code		LBT227		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		It is the objective of this course to enable the undergraduate students to understand the production of genetically modified organisms (GMO), application areas of GMO, the biosafety and food safety legislations.							
Course Content		Gene transfer methods, gene transfer in different organisms, biotechnological applications in agricultural and medical field							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation)					
Name of Lecturer(s)									

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

### Recommended or Required Reading

1	Bayraç, A.T., Kalemtaş, G., Baloğlu, M.C., Kavas, M., 2011. Genetiği Değiştirilmiş Organizmalar. ISBN: 978-9944-344-30-2
2	Aslan, D., Şengelen, M., 2010. Farklı Boyutlarıyla Genetiği Değiştirilmiş Organizmalar Ankara Tabip Odası
3	Poindron P., 2012. Genetically Modified Organisms and Genetic Engineering in Research and Therapy" Editor(s): Piguet P" ISBN: 978-3-8055-9065-5.
4	National Research Council, 1989. Field Testing Genetically Modified Organisms. The National Academies Press. ISBN:978-0-309-04076-1
5	Topal, Ş. 2006. Biyogüvenlik ve Biyoteknoloji, Cemturan Ofset Matbaası

Week	Weekly Detailed Course Contents	
1	Theoretical	Genetically modified organisms (GMOs) history and description
2	Theoretical	Gene transfer methods
3	Theoretical	Gene transfer methods
4	Theoretical	General information about transgenic organisms
5	Theoretical	Development of GMOs
6	Theoretical	Transgenic mammal farm animal production and application fields
7	Theoretical	Transgenic plant production and application fields
8	Intermediate Exam	Midterm Exam
9	Theoretical	Transgenic microorganism and application fields
10	Theoretical	The use of GMOs in medical and food science area
11	Theoretical	Disease model transgenic laboratory animals and application areas
12	Theoretical	Other transgenic animals (primate, chicken, fish, insect)
13	Theoretical	National and international regulations in production and trade of GMOs
14	Theoretical	Biosecurity and food safety rules, ethical issues about transgenic organism
15	Theoretical	Biosecurity and food safety rules, ethical issues about transgenic organism
16	Final Exam	Final Exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Assignment	14	0	1	14
Midterm Examination	1	7	1	8



Final Examination	1	10	1	11
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

1	Having the knowledge and awareness of genetically modified organism (GMO) and application of GMO
2	Gene transfer methods
3	To know the purposes of production and application areas of transgenic organism
4	To know arrangements need to be considered in the production of transgenic organisms
5	To learn National and international regulations in production and trade of GMOs

### Programme Outcomes (Laboratory Technology)

1	To be able to comprehend social, cultural and social responsibilities, to be able to follow national and international contemporary problems and developments
2	Atatürk is bound to Atatürk nationalism in the direction of principles and reforms; Adopting the national, moral, spiritual and cultural values of the Turkish people, open to universal and contemporary developments, the Turkish language is a rich, rooted and productive language; Have a love of language and a consciousness; To have the ability to use as much of a foreign language as he would need to read, taste and habit and professionally.
3	To be able to recognize the basic hardware units and operating systems of a computer, having information about internet usage and preparing documents, spreadsheets and presentations on computer by using office programs.
4	Acquires theoretical and practical knowledge at the basic level in mathematics, science and vocational field.
5	With the knowledge of laboratory technology in the field, he knows and analyzes problems, brings interpretation of data and suggests solutions.
6	In laboratories, according to the prepared business plan and program, necessary work can be done to obtain the desired quality products.
7	To have professional and ethical responsibility in business life.
8	Development and change are open, follow scientific social and cultural innovations, and develop themselves constantly.

### Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	2	2	2	2	2
P4	3	3	3	3	3
P5	4	4	4	4	4
P6	4	4	4	4	4
P7	4	4	4	4	4
P8	4	4	4	4	4

