AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Genetically Modified Organisms and Biosafety								
Course Code	GMP521		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	8	Workload	200 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	To provide information about genetically modified organisms (GMO), their usage as food, the ongoing debate on biosafety, and GMO detection methods.								
Course Content	Production and purposes of genetically modified (transgenic) plant and animal organisms, basic concepts and definitions related to animal and plant biotechnology and genetics, status of transgenic crops in Turkey and the world, the effects of the transgenic plant foods on the health, environment, biodiversity, and socio-economic structure, discussion on transgenic organisms in terms of pharmacy, medicine, veterinary, and basic research, transgenic plants used as food, biosecurity, national and international regulations.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case Study, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	50
Quiz	4	10
Attending Lectures	1	10

Recommended or Required Reading	
1	Genetically Modified Foods: Potential Human Health Effects, Pusztai A. Bardocz S. Ewen SWB. In: D'Mello JPF, ed. Food Safety: Contaminants and Toxin. UK: CAB International, Wallingford Oxon, 347-72, 2003.
2	Genetically Modified Organisms-Transgenesis in plants, Tuorte, Y., Science Publishers Inc., Enfield (NH), Plymouth (UK), 2003.

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition of GMO
2	Theoretical	Classification of GMO
3	Theoretical	Gene transfer methods
4	Theoretical	Place of GMOs in the economy
5	Theoretical	Definition of Biosafety
6	Theoretical	Biosecurity practices in the world
7	Theoretical	Biosecurity practices in Turkey
8	Theoretical	The impact of GMOs on people and the environment
9	Intermediate Exam	Midterm Exam
10	Theoretical	GMO detection methods in food
11	Theoretical	DNA-based methods
12	Theoretical	The use of GMO detection kit
13	Theoretical	GMO detection technology
14	Theoretical	GMO laboratory infrastructure for diagnosis

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	9	3	168
Quiz	4	0	0.25	1
Midterm Examination	1	14	1	15

Final Examination	1	15	1	16
			Total Workload (Hours)	200
			[Total Workload (Hours) / 25*] = **ECTS**	8
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	
2	
3	
4	
5	

Programme Outcomes *(Food Engineering Master)*	
1	To provide further training and research opportunities to food engineers to meet the needs of the food industry
2	To develop and deepen the current and advanced knowledge in the field of food engineering with original thought and / or research at the level of expertise, based on the qualifications of the master
3	To identify, define, formulate and solve problems in applications related to Food Engineering and gain the ability to select and apply appropriate analytical methods and modeling techniques
4	To gain the ability to evaluate the accuracy of the data obtained from food analysis
5	To educate students having research, entrepreneur qualifications

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	1		1	1	
P2		1	1		
P3				1	3
P4	1	1	2		
P5	3	1	2	1	