AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Biotechnology and Food Industry							
Course Code	VBH632		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	3	Workload	75 *(Hours)*	Theory	1	Practice	0	Laboratory	0
Objectives of the Course	To give information about the history and application areas of biotechnology, gene transfer technique and to explain the relationship between genetically modified foods and health							
Course Content	Definition and application areas of biotechnology, methods used in the analysis of genetically modified organisms, risks, benefits and health hazards of genetically modified foods and legal regulations.							
Work Placement	N/A							
Planned Learning Activities and Teaching Methods			Explanation (Presentation), Discussion					
Name of Lecturer(s)								

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Aran N, Gıda Biyoteknolojisi, 2010, Ankara
2	Lee BH, Fundamentals of Food Biotechnology, 2015, UK

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition of biotechnology
2	Theoretical	Application areas of biotechnology in food industry
3	Theoretical	Identification of genetically modified organisms in food sector and GMO application methods
4	Theoretical	Gene transfer techniques in food industry
5	Theoretical	Methods used in the analysis of genetically modified organisms in the food sector
6	Theoretical	Protein determination for methods
7	Theoretical	Investigation of DNA based methods
8	Theoretical	Midterm exam
9	Theoretical	Overview of the proposed risk management system in terms of biosecurity and biodiversity
10	Theoretical	Determination of potential risks in genetically modified foods
11	Theoretical	Benefits of genetically modified foods
12	Theoretical	Assessment of health hazards of GMOs in food sector
13	Theoretical	Determination of GMOs in food sector
14	Theoretical	Labeling of GMOs in food industry
15	Theoretical	Examination of legal regulations on genetically modified foods in food sector

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	1	28
Assignment	10	1	1	20
Midterm Examination	1	10	1	11
Final Examination	1	15	1	16
			Total Workload (Hours)	75
			[Total Workload (Hours) / 25*] = **ECTS**	3

25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Definition and history of biotechnology

2	Application areas of biotechnology
3	Gene transfer technique in food industry
4	Learning the methods used in the detection of genetically modified organisms in the food sector
5	To have knowledge about the benefits and harms of genetically modified foods in the food sector
6	Assessment of health risks of GMOs in food sector

Programme Outcomes *(Food Hygiene and Technology (Veterinary Medicine) Doctorate)*

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	

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

	L1	L2	L3	L4	L5	L6
P1	4	4	4	4	4	4
P2	4	4	4	4	4	4
P3	5	5	5	5	5	5
P4	5	5	5	5	5	5
P7	5	5	5	5	5	5
P9	5	5	5	5	5	5
P10	4	4	4	4	4	4
P13	4	4	4	4	5	5