AGRIGULTURAL BIOTECHONOLGY									
1	Course Title:	AGRIGU	JLTURAL BIOTECHONOLGY						
2	Course Code:	TOHZ22	25						
3	Type of Course:	Compuls	sory						
4	Level of Course:	Short Cy	/cle						
5	Year of Study:	2							
6	Semester:	3							
7	ECTS Credits Allocated:	4.00							
8	Theoretical (hour/week):	3.00							
9	Practice (hour/week):	2.00							
10	Laboratory (hour/week):	0							
11	Prerequisites:	None							
12	Language:	Turkish							
13	Mode of Delivery:	Face to	face						
14	Course Coordinator:	Prof. Dr. AYDIN TÜRKEÇ							
15	Course Lecturers:								
16	Contact information of the Course Coordinator:	Doç.Dr. Aydın Türkeç Uludağ Üniversitesi Mustafakemalpaşa Meslek Yüksekokulu Mustafakemalpaşa/BURSA aturkec@uludag.edu.tr 0224 613 3102							
17	Website:								
18	Objective of the Course:	Learning of the latest techniques in plant molecular biology and its effect in agricultural structure of Turkey							
19	Contribution of the Course to Professional Development:								
20	Learning Outcomes:								
		1	Know about history and defination of agricultural biotechnology and its use						
		2	Understand the importance of agricultural biotechnology in Turkey						
		3	Study about molecular structure of DNA						
		4	Know about princibles of gen isolation and cloning						
		5	Know about fundamentals of plant transformation methods						
		6	Know about transgenic plants						
		7	Know about plant transformation techniques						
		8	Learn about molecular markers and their applications						
		9							
		10							
21	Course Content:								
	Course Content:								
Week			Practice						
1	Aims of lesson, introduction to agriculation biotechnology definitions, application	ns	Study on application of agricultural biotechnology						
2	Production of Global transgenic crop improvement	s and	Equipments and and instruments and their use						

Molecular structure of the DNA and chromosomes									
biosythesis finethods of DNA isolation Gene isolation methods components of gene cloning and their functions 7 Aplication of agricultural biotechnology-advantages and limitations 8 Polymerase Chain Reaction (PCR) — procedure and applications 9 Gene cloning and manipulation techniques electrophoresis 10 Principles of gene transfer — indirect method of gene transfer method gene transfer method gene transfer method of gene transfer — indirect method of gene transfer method of gene transfer — indirect methods of particle bombardment /chemical method, electroporation, microinjection 11 Methods of gene transfer — direct methods of transformation 12 Methods of gene transfer — direct methods of particle bombardment /chemical method, electroporation, microinjection 13 Transgenic plants- applications in crop improvement 14 Molecular markers and their applications 22 Textbooks, References and/or Other Materials: Discontinuous provides and provides and particle plants and plants applications of molecular markers and their applications of molecular markers and their applications of molecular markers. Discontinuous provides and pro	3	DNA izolasyon tekniklerinin verilmesi		Molecular structure of the DNA and chromosomes					
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Total 2 100.00 Contribution of Term (Year) Learning Activities to Success Grade 40.00 Contribution of Final Exam to Success Grade 60.00 Total 100.00 Measurement and Evaluation Techniques Used in the Course	Home v	work-project	0	0.00					
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Total 100.00 Measurement and Evaluation Techniques Used in the Course				40.00					
Measurement and Evaluation Techniques Used in the Course	Contrib	oution of Final Exam to Success Grade)	60.00					
Course	Total			100.00					
24 ECTS / WORK LOAD TABLE		•	sed in the						
	24	ECTS / WORK LOAD TABLE							

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	4	2.00	8.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	18.00	18.00
Others	0	0.00	0.00
Final Exams	1	24.00	24.00
Total Work Load			120.00
Total work load/ 30 hr			4.00
ECTS Credit of the Course			4.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
ÖK1	4	3	2	2	5	3	3	3	3	3	2	2	4	3	2	3
ÖK2	4	3	2	2	5	3	3	3	3	3	2	2	4	3	2	3
ÖK3	4	3	2	2	5	3	3	3	3	3	2	2	4	3	2	3
ÖK4	4	3	2	2	5	3	3	3	3	3	2	2	4	3	2	3
ÖK5	4	3	2	2	5	3	3	3	3	3	2	2	4	3	2	3
ÖK6	4	3	2	2	5	3	3	3	3	3	2	2	4	3	2	3
ÖK7	4	3	2	2	5	3	3	3	3	3	2	2	4	3	2	3
ÖK8	4	3	2	2	5	3	3	3	3	3	2	2	4	3	2	3
LO: Learning Objectives PQ: Program Qualifications																
Contrib 1 very low 2 ution Level:			2 low		3	Medi	um	4 High			5 Very High					