PLANT BREEDING

1	Course Title:	PLANT BREEDING	
2	Course Code:	EBYZ224	
3	Type of Course:	Compulsory	
4	Level of Course:	Short Cycle	
5	Year of Study:	2	
6	Semester:	4	
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:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ABDULLAH KARASU	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	akarasu@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	To teach , obtain, the plants have the highest yield ,resistant of pest and diases, and , have high-quality.	
19	Contribution of the Course to Professional Development:	In Agricultural Production; The most important factor is the cultivation and use of a high-yield, high-quality, machine-harvested plant that is resistant to biotic and abiotic stress conditions. Students who are successful in the course direct their studies for this purpose.	
20	Learning Outcomes:		
		1	Understands the purpose of plant breeding and its importance for humanity
		2	Have knowledge about reproductive biology in plants
		3	Understands the causes of incompatibility and infertility in plants
		4	Have knowledge about the use of infertility and infertility in plant breeding.
		5	Understands the basic breeding methods.
		6	Have knowledge about the use of new breeding methods in plant breeding by using basic breeding methods.
		7	Learns which breeding method is more suitable for which purpose according to the biology of plants
		8	Understands the practical use of hybrid breeding
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	The importance and history of plant breeding, key elements for success in plant breeding	Flower structures of plants

2	Reproduction in plants and its relationship with plant breeding	pollination, fertilization, seed formation and seed structure
3	Self and foreign fertilization causes and apomixis	Apomictic breeding plants
4	What is conflict, conflict systems	The importance of conflict systems in breeding
5	Infertility and its types in plants	The importance of infertility in plant breeding
6	Male infertility and types of male infertility	The use of male infertility in plant breeding
7	Selection breeding methods	Selection breeding in vegetative cogalan and foreign fertilized plants
8	Selection breeding in self-fertilized and foreign fertilized plants	Basic principles in hybridization
9	Combination breeding in self-fertile plants	Genetic bases of combination breeding
10	Single seed method and pulk-progeny method	Application of pedigree and bulk method in self-fertilizing plants
11	Backcrossing method	Convergence breeding method
12	Hybrid breeding, determination of General and Special Combination capabilities	Determination of adaptability with Polycros and Topcros methods
13	Single hybrid, modified single hybrid , triple hybrid and double hybrids	Creation of single, triple and double hybrids by taking advantage of cytoplasmic male infertility
14	Mutation breeding, New breeding methods	Mutation types Anther and pollen cultures

22	Textbooks, References and/or Other Materials:	Plant Breeding. Prof. Dr. H. Ruhi Ekingen. Uludağ univercity Faculty of Agriculture lecture notesı No: 31. Bitki Islahı. Prof. Dr. Sezen Sehirali. Prof. Dr. Murat Bitki Islahı. Prof. Dr. Hadeyin Gökçora. Ankara univercity Faculty of Agriculture lecture notesı No: 370.textbookı :235
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	40.00
Home work project	0	0.00
Final Exams	2	100.00
Total		
Success Grade		

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	0	0.00	0.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	22.00	22.00
Others	0	0.00	0.00
Final Exams	1	28.00	28.00
Total Work Load			120.00
Total work load/ 30 hr			4.00
ECTS Credit of the Course			4.00

Total	100.00
Measurement and Evaluation Techniques Used in the Course	It is evaluated according to the principles of Bursa Uludağ University Associate and Undergraduate Education Regulation.

24	**ECTS / WORK LOAD TABLE**

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	3	4	4	4	3	5	4	4	4	4	4	4	0	0	0	0
ÖK2	5	3	4	4	4	4	5	4	3	4	4	4	0	0	0	0

ÖK3	4	5	4	3	4	4	5	4	4	3	4	4	0	0	0	0
ÖK4	4	4	3	5	3	3	5	4	3	4	4	3	0	0	0	0
ÖK5	3	4	4	4	3	4	4	3	3	4	3	4	0	0	0	0
ÖK6	4	4	3	4	3	4	3	4	3	4	4	3	0	0	0	0
ÖK7	4	4	4	3	4	3	4	3	4	3	4	4	0	0	0	0
ÖK8	3	4	4	4	4	3	3	4	4	4	4	3	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**