GAMETOGENESIS AND EMBRYO DEVELOPMENT IN FRUIT SPECIES

1	Course Title:	GAMETOGENESIS AND EMBRYO DEVELOPMENT IN FRUIT SPECIES
2	Course Code:	BAB6013
3	Type of Course:	Optional
4	Level of Course:	Third Cycle
5	Year of Study:	1
6	Semester:	1
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ÜMRAN ERTÜRK
15	Course Lecturers:	Prof.Dr. Cevriye MERT
16	Contact information of the Course Coordinator:	E-posta: umrane@uludag.edu.tr Telefon: 0 224 2941471 Adres: Uludağ Üniversitesi, Ziraat Fakültesi, Bahçe Bitkileri Bölümü, Görükle Kampüsü, 16059 Nilüfer, Bursa
17	Website:	
18	Objective of the Course:	The aim of this course is to teach the basic information about the formation of gametes in fruit species and related to both breeding and fruit keeping and yield.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	Learn flower arrangements in fruit species
	2	The importance of pollination and fertilization in fruit behavior
	3	Learn about conflict and infertility
	4	Learn factors affecting gamet formation factors
	5	Learn the importance of variety selection when setting up a fruit orchard
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21	Course Content:	

Course Content:	

Week	Theoretical	Practice
1	Flower Formation in Fruit Species	
2	Male Gamet Formation (Pollen Development)	
3	Female Gamet Formation	

4	Environmental Factors Affecting Male and Female Gamet Formation	
5	Physiological Factors Affecting Male and Female Gamet Formation	
6	Powder and Pollen Stigma Interaction	
7	Pollen Slaughter, Tube Development and Fertilization	
8	Infertility in fruit species	
9	Incompability in fruit species	
10	Endosperm and embryo development	
11	Apomixis and parthenocarpy	
12	Development of fruit	
13	Discussion of research topics	
14	Discussion of research topics	

22	Textbooks, References and/or Other Materials:	Heslop – Harrison, J. 1972.Sexuality of Angiosperms. (In F.C.Steward. Editor) Plant Physiology. Academic Pres New York and London 133 – 289. Hartmann, F.O. and Howlett, H.1954. Fruit Setting of the Delicious Apple. Ohio Agr. Exp. Sta. Res. Bull. 745, 64 p. Polito, V.S., 1985. Flower Differentiation and Pollination. In:D.E. Ramos , Editor, Walnut Orchard Management, 81-86. Univ. Of California, Cooperative Extention, USA. Mckay, J.W. 1947. Embriyology of pecan. J.Agr. Res. 263-283.

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	5.00	70.00
Homeworks	4	10.00	40.00
Projects/Assesment	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			154.00
Total work load/ 30 hr			5.13
ECTS Credit of the Course			6.00

Contribution of Term (Year) Learning Activities to Success Grade	0.00
Contribution of Final Exam to Success Grade	100.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	

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	5	4	4	3	4	0	0	0	0	0	0	0	0	0	0	0

ÖK2	5	4	3	3	3	0	0	0	0	0	0	0	0	0	0	0
ÖK3	4	3	4	3	4	0	0	0	0	0	0	0	0	0	0	0
ÖK4	4	3	3	4	3	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications				
Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**