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. CEVRİYE MERT	
15	Course Lecturers:	Prof.Dr. Ümran Ertürk	
16	Contact information of the Course Coordinator:	Bursa Uludağ Üniversitesi, Ziraat Fakültesi, Bahçe Bitkileri Bölümü, Görükle Kampüsü, 16059 Nilüfer, BURSA E-posta: cevmert@uludag.edu.tr Telefon: 0 224 2941542	
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:	Gains detailed information about gametogenesis and embryo development in fruit species. Students apply the knowledge learned in this course in their professional life.	
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	3.00	42.00
Homeworks	2	24.00	48.00
Projects	0	0.00	0.00
Quiz	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Final Exam	1	100.00	0.00
Others	0	0.00	0.00
Final Exams	1	50.00	50.00
Contribution of Term (Year) Learning Activities to	0.00		
Total Work Load			182.00
Contribution of Final Exam to Success Grade	100.00		6.07
ECTS Credit of the Course			6.00

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Quiz	0	0.00
Final Exam	1	100.00
Total Work Load of Term		0.00

Measurement and Evaluation Techniques Used in the Course	Final Exam

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	1	1	1	1	1	0	0	0	0	0	0
ÖK2	5	4	3	3	3	1	1	1	1	1	0	0	0	0	0	0
ÖK3	4	3	4	3	4	1	1	1	1	1	0	0	0	0	0	0

ÖK4	4	3	3	4	3	1	1	1	1	1	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**