BEE KEEPING AND SILKWORM BREEDING

1	Course Title:	BEE KEEPING AND SILKWORM BREEDING	
2	Course Code:	ZOO2406	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ÜMRAN ŞAHAN	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Uludağ Üniversitesi Ziraat Fakültesi Zootekni Bölümü Görükle- Bursa umran@uludag.edu.tr 224 2941553	
17	Website:		
18	Objective of the Course:	Gains knowledge about perform technical beekeeping, colony management, produce of bee products, the pests and diseases of bees; silkworm breeding, produce cocoon and raw silk and silkworm eggs, the diseases of silkworm	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Knows the important species of bee and silkworm species that breed in different regions of the World.
		2	Knows the important morphological and physiological charachteristics of bees and silkworm.
		3	Knows and applies the management methods used in bee and silkworm breeding.
		4	Learns the importance, charachteristics and the usage of products such as honey, pollen, royal jelly, bee venom, propolis and beeswax.
		5	Learns the importance of beekeeping in pollination.
		6	Knows the physical and chemical charachteristics of silkworm cocoon and raw silk and also the usage of silk.
		7	Knows the methods and stages of reproductive and ındustrial eggs.
		8	Knows the diseases and pests of beekeeping and silkworm rearing.
		9	
		10	
21	Course Content:		
	Course Content:		
Week	Theoretical		Practice

1	History of beekeeping and development as an industry, current state of beekeeping in the World and Turkey	
2	The essential requirements for technical beekeeping	
3	Taxonomic classification of bees, the body structure of bees' and bee species	
4	Components of the colony, activities and behaviors of the colony	
5	Usage and specifications of the products that made and collected from environment by bees	
6	Queen bee breeding, production of royal jelly and the feeding of honey bees	
7	The enemies of honey bees (diseases and pests)	
8	Repeating courses and midterm exam	
9	History of sericulture in our country, the production, consumption and economic impotance of its in the World and Turkey	
10	Species of silkworm and their charachteristics, the morphological and physiological charachteristics, the incubation and hatching of silkworm eggs	
11	Genetic and breeding of silkworm, the main factors that influence the silkworm rearing	
12	mountage, harvesting of cocoon, the production of reproductive eggs	
13	cultivation of mulberry	
14	Materials:	973-94210-0-3, Tekirdağ
		Esasları, Atatürk Üniversitesi Yayınları:931, Ziraat Fakültesi Yayınları: 341, Ders Kitapları Serisi:88 ,
		GOJMERAC L.W., 1980, Bees, Beekeeping Honey and
		The Silkworm: an İmportant Labaratory Tool (Y. TAZIMA)
		ŞAHAN, Ü. 1993. Zootekni. (Tavukçulluk., Arılık ve İpekböceği Yetiştirme Bölümleri) (12-13-14-15-16-17-18-19 .Üniteler). Anadolu Üniversitesi Açık Öğretim Fak. Yayın No: 485, Anadolu Üniversitesi Basımevi, Eskişehir, 191- 332 (ISBN 975-492-628-X). ŞAHAN, Ü. 2011.İpekböcekçiliği (İpekböceği Yetiştirme ve Islahı, Koza Üretimi, Ham İpek, Yumurta Üretimi, Hastalıklar ve Dut Yetiştirme.Dora Yayınları, Bursa, ISBN: 978-605-4118.

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	5	6.00	30.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	1	6.00	6.00
Midterm exams	1	10.00	10.00
Others	6	5.00	30.00
Final Exams	1	15.00	15.00
Total Work Load			129.00
Total work load/ 30 hr			4.97
ECTS Credit of the Course			4.00

23 Assesment

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	40.00
Quiz	0	0.00

Home work-project	0	0.00
Final Exam	1	60.00
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		

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	1	0	0	1	0	4	3	0	0	0	0	0	0	0	0
ÖK2	4	5	4	5	4	3	5	3	0	0	0	0	0	0	0	0
ÖK3	5	5	3	5	4	5	5	3	0	0	0	0	0	0	0	0
ÖK4	2	5	3	4	5	3	2	5	3	5	0	0	0	0	0	0
ÖK5	2	0	3	5	2	5	0	0	2	0	0	0	0	0	0	0
ÖK6	5	5	4	5	5	5	5	4	3	3	0	0	0	0	0	0
ÖK7	5	5	3	5	5	4	4	3	2	0	0	0	0	0	0	0
ÖK8	5	5	4	3	4	3	4	3	0	4	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**				