SILAGE TECHNOLOGY

1	Course Title:	SILAGE TECHNOLOGY	
2	Course Code:	ZOO4413-S	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	7	
7	ECTS Credits Allocated:	3.00	
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. İsmail FİLYA	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Bursa Uludağ Üniversitesi Ziraat Fakültesi Zootekni Bölümü, Görükle Kampüsü 16059 Bursa/TÜRKİYE ifilya@uludag.edu.tr, 0 224 2941555	
17	Website:	http://bilgipaketi.uludag.edu.tr/Ders/Index/1168802	
18	Objective of the Course:	To provide students with practical knowledge and skills about silage fermentation, silage production, silage quality, use of silage in animal nutrition and national dissemination.	
19	Contribution of the Course to Professional Development:	Learn about the making and use of silage.	
20	Learning Outcomes:		
		1	Learns the basic principles of silage fermentation.
		2	Learns about silo types used in silage construction and their effects on silage quality.
		3	Gain information about the plants used in silage production and their chemical and microbiological properties.
		4	Gains information about all stages of silage making such as harvesting, withering, shredding, enrichment with additives, transportation and filling, compaction and capping.
		5	Learns about silage quality, factors affecting silage quality and physical, chemical and microbiological analyzes used to determine silage quality.
		6	Learns about aerobic stability and hygiene in silages.
		7	Gains information about the nutritional value of silages.
		8	Gains information about the use of different silages in ruminant feeding.
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	History of silage making, advantages of silage, principles of silage making.	

2	Types and properties of silos used in silage production.	
3	Plants used in silage production and siloability properties of these plants.	
4	Chemical and microbiological properties of plants used in silage production.	
5	Stages of silage making, harvesting the plants used in silage making.	
6	Withering and fragmentation of plants used in silage making.	
7	Additives used in silage fermentation, their properties and their effects on silage fermentation.	
8	Transporting the plants to be siled from the field to the silo and filling them into the silos.	
9	Compressing the plants to be ensiled in the silos and closing the silos.	
10	Aerobic period, fermentation period, fermentation dynamics and stable period dynamics in the silo.	
11	Opening of maturing silage and quality of silage.	
12	Aerobic stability in silages, the importance and development of aerobic stability, silage hygiene.	
13	Nutritional values ??of various silages	

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	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	20.00	20.00
Others	0	0.00	0.00
Final Exams	1	42.00	42.00
Total Work Load			90.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

22	Textbooks, References and/or Other	Woolford, M.K. 1984. The Silage Fermentation. … Biochemistry of Silage. Second Edition. Chalcombe … Filya, İ. 2006. Silaj: Yapımı, Teknolojisi ve Kullanımı. … Teknolojisi. Bursa Uludağ Üniversitesi Ziraat Fakültesi …
23	Assesment	

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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		It is evaluated according to the our university's graduate education and training regulations.

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