DAIRY SCIENCE

1	Course Title:	DAIRY SCIENCE	
2	Course Code:	VBH 6013	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	1.00	
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. SERAN TEMELLİ	
15	Course Lecturers:	Yok	
16	Contact information of the Course Coordinator:	e-posta: seran@uludag.edu.tr Tel: 02242941260 Adres: Uludağ Üniversitesi Veteriner Fakültesi Besin Hijyeni ve Teknolojisi Anabilim Dalı Görükle	
17	Website:	http://saglikbilimleri.uludag.edu.tr	
18	Objective of the Course:	To teach proteins, carbohydrates, lipids, vitamins, minerals, enzymes, gasses, organic acids, preservative substances in milk, their chemical properties, structures, classifications, metabolism, mechanism of production, contaminants in milk	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Learns formation of milk , composition, importance in nutrition, product in in our country and in the World.
		2	Learns milking, commingling, transport, transfer to plants.
		3	Learns importance of somatic cell count in milk.
		4	Learns phsicochemical properties of milk as acidity, density, freezing point.
		5	Learns classification of milk fat, chemical structure and properties, importance in nutrition and technology.
		6	Learns classification of milk proteins, their chemical structure and properties, importance in nutrition and technology.
		7	Learns classification of milk carbohydrates, their chemical structure and properties, importance in nutrition and technology.
		8	Learns chemical structure of milk enzymes, classifications, use in milk technology.
		9	Learns classification of vitamins and minerals, factors effecting their presence in milk.
		10	Learns antibiotics, drug residues, foreign substances in milk
21	Course Content:		

	Course Content:	
Week	Theoretical	Practice
1	Formation of milk , composition, importance in nutrition, product in in our country and in the World.	
2	Milking, commingling, transport, transfer to plants,	
3	Phsicochemical properties of milk I (color, taste, odor, acidity, density)	
4	Phsicochemical properties of milk II (feezing-biling point, viscosity, elecrtic impedance, redox potential, elektrik geçirgenliği, redox potential)	
5	Milk lipids I (classification of milk fat, chemical structure and properties)	
6	Milk lipids II (milk fat globules, chemical reactions, milk fat constants)	
7	Nitrogen compounds I (classification, chemical structure and properties of casein)	
8	Nitrogen compounds II (precipitation methods for casein, denaturation of serum proteins)	
9	Milk carbohydrates I (classification, properties of lactose, and chemical interactions)	
10	Milk carbohydrates II (lactose fermentation and areas used)	
11	Milk minerals (factors effecting mineral	
12	Minor components in milk (vitamins, milk gasses, organic acids, preservatives, somatic	
13	Contaminants (antibiotics, drug residues,	
14		
22	Textbooks, References and/or Other	1. Fox, P.F. and McSweeney, P.L.H. Advanced Dairy Chemistry, Volume 1: Proteins, Part A, Kluwer Academic/Plenum Publishers, New York, 2003. 2. Metin, M. Süt Teknolojisi, Sütün Bileşimi ve İşlenmesi, Cilt 1, Ege Üniversitesi Basımevi, İzmir, 2000. 3. Tekinşen, O.C. ve Nizamlıoğlu, M. Süt Kimya, Bilim Basım, Selçuk Üniversitesi Basımevi, Konya, 2001. 4. Kurt, A., Çakmakçı, S. ve Çağlar, A. Süt ve Mamulleri Analiz ve Muayene Metotları, Atatürk Üniv. Basım, Selçuk Üniversitesi Basımevi, Konya, 2003. 5. http:www.gkgm.gov.tr. Türk Gıda Kodeksi. İlgili
23	Assesment	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	1.00	14.00
Practicals/Labs	0	0.00	0.00
Selfstudy and preperation	14	5.00	70.00
Homeworks	0	0.00	0.00
Projects	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			86.00
Total work load/ 30 hr			2.87
ECTS Credit of the Course			3.00

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	0	0.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	100.00
Total	1	100.00
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	1	5	1	2	1	1	1	1	1	1	1	1	0	0	0	0
ÖK2	4	4	4	4	5	1	2	2	1	3	2	5	0	0	0	0
ÖK3	5	3	5	5	4	1	2	2	5	4	3	5	0	0	0	0
ÖK4	3	5	5	4	5	1	2	1	5	2	2	1	0	0	0	0
ÖK5	3	5	5	4	5	1	2	1	5	2	2	1	0	0	0	0
ÖK6	3	5	5	4	5	1	2	1	5	2	2	1	0	0	0	0
ÖK7	3	5	5	4	5	1	2	1	5	2	2	1	0	0	0	0
ÖK8	3	5	5	4	5	1	2	1	5	2	2	1	0	0	0	0
ÖK9	3	5	5	4	5	1	2	1	5	2	2	1	0	0	0	0
ÖK10	4	2	5	5	5	2	3	1	5	4	1	1	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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