

FERMENTED DAIRY PRODUCTS TECHNOLOGY

1	Course Title:	FERMENTED DAIRY PRODUCTS TECHNOLOGY	
2	Course Code:	GSD4225-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):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	Non	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. TÜLAY ÖZCAN	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Uludağ Üniversitesi Ziraat Fakültesi Gıda Mühendisliği Bölümü 16059 Görükle/Bursa Tel: 0 224 2941498 Fax: 0 224 2941402 e-posta: : tulayozcan@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	The main purpose of this course is informing the students about various fermented milk products manufacturing technology and their quality characteristics.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Informing about chemistry and biochemistry of fermented milk products
		2	Informing about various kinds of fermented milk products manufacturing technology (yoghurt, kefir, koumiss and functional milk products and probiotics)
		3	Informing about butter manufacturing technology
		4	Informing about traditional and foreign cheese manufacturing technology
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21	Course Content:		
		Course Content:	

Week	Theoretical	Practice		
1	The Starter Cultures Used in The Production of Fermented Dairy Products	Sampling Methods from Fermented Dairy Products (Cheese, Yoghurt and Buttermilk etc.)		
2	Propagation of Pure Cultures	Manufacturing of Starter Cultures and Their Activity Tests		
3	Chemistry of Yoghurt and Acid Gels	Manufacturing of Yoghurt		
4	Yoghurt Manufacturing Technology	Manufacturing of Fruit Yoghurt		
5	Buttermilk Manufacturing Technology	Yoghurt Analyses Titritable Acidity Milk Fat		
6	Class Discussion and Midterm Exam	Yoghurt Analyses Syneresis Starch Test		
7	Fruit Yoghurt Manufacturing Technology	Manufacturing of Kefyr		
8	Types of Yoghurt and Functional Dairy Products	Analyses of Kefyr and Koumiss Titritable Acidity CO2		
9	Koumiss Manufacturing Technology	Buttermilk Analyses Free Fatty Acids Milk Fat Analyse		
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	2.00	28.00
Practicals/Labs		14	2.00	28.00
Self study and preperation		Dried Matter Milk Fat	0.00	0.00
Homeworks		1	5.00	5.00
Projects		Cheese Analyses	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams		1	15.00	15.00
Others		0	0.00	0.00
Final Exams		1	20.00	20.00
Total Work Load				111.00
Total work load/ 30 hr				3.20
ECTS Credit of the Course				3.00
Materials:		Unpublished Lecture Note) All Aspects of Cheese Technology I, II (Prof. Dr. Mustafa ÜÇÜNCÜ) Science and Technology of Yoghurt (Prof. Dr. Barbaros ÖZER) Fundamentals of Cheese Science (Ed: Prof. Dr. Barbaros ÖZER and Adnan Hayaloğlu) Dairy Science and Technology (Edited by P. Walstra, J.T.M. Wouters, T.J. Geurts) Advanced Dairy Chemistry: Vol, 1, 2, 3 (Edited by P. L. H. McSweeney, P. F. Fox) Cheese: General Aspects 3 (Edited by P. F. Fox) Milk and Milk Products: Technology, Chemistry, and Microbiology (Edited by A. H. Varnam, J. P. Sutherland)		
23	Assesment			

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	30.00
Quiz	0	0.00
Home work-project	1	10.00
Final Exam	1	60.00
Total	3	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	5	4	4	4	5	4	4	5	5	5	4	0	0	0	0	0
ÖK2	5	4	4	4	5	4	4	5	5	5	4	0	0	0	0	0
ÖK3	5	3	5	4	5	4	4	5	5	5	4	0	0	0	0	0
ÖK4	5	3	5	4	5	4	4	5	5	5	4	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							