	ENZYMI	ES IN	FOOD INDUSTRY						
1	Course Title: ENZYMES IN FOOD INDUSTRY								
2	Course Code:	GMB5031							
3	Type of Course:	Optional							
4	Level of Course:	Second Cycle							
5	Year of Study:	1							
6	Semester:	1							
7	ECTS Credits Allocated:	6.00							
8	Theoretical (hour/week):	2.00							
9	Practice (hour/week):	0.00							
10	Laboratory (hour/week):	2							
11	Prerequisites:								
12	Language:	Turkish							
13	Mode of Delivery:	Face to face							
14	Course Coordinator:	Prof. Dr. OZAN GÜRBÜZ							
15	Course Lecturers:								
16	Contact information of the Course Coordinator:	Uludağ Üniversitesi Ziraat Fakültesi Gıda Mühendisliği Bölümü 16059 Görükle/Bursa Tel: 0224 2941500 Fax: 0224 2941402 e-posta: ozang@uludag.edu.tr							
17	Website:								
18	Objective of the Course:	Informing about enzyme structure, types, systematics and usage of enzymes in food industry							
19	Contribution of the Course to Professional Development:	The course provides students with knowledge about enzymes used in the food industry.							
20	Learning Outcomes:								
		1	The students will be able to learn enzyme chemistry						
		2	The students will be able to learn systematics, denomination and classification of enzymes						
		3	The students will be able to learn enzyme kinetics						
		4	The students will be able to learn factors effecting enzyme velocity						
		5	The students will be able to learn commercial enzyme production and isolation of enzymes						
		6	The students will be able to learn purification of enzymes						
		7	The students will be able to learn enzyme usage in starch and candy industry, bakery, beverage technology, milk and dairy industry, oil industry						
		8	Learning about enzyme usage and applications in beverage industry						
		9	Learning about the use of enzymes in the dairy industry and the role of enzymes in determining milk quality						
		10	D Learning about the use of enzymes in the oil industry and the role of enzymes in obtaining oil from oilseeds.						
21	Course Content:	Course Content:							
		Co	ourse Content:						
Week	Theoretical Practice								

1	Explan lecture	ation of	f objec	tive a	nd cont	tent of	fthe													
2	Enzym	e chem	nistry																	
3	System of enz	atics, o ymes	denom	inatio	n and c	lassifi	icatior	ı												
4	Enzym	e kineti	cs																	
5	Factors	effecti	ing enz	zyme	velocity	/														
6	Commof enzy	ercial e mes	nzyme	prod	uction a	and is	olatior	۱												
7	Purifica	tion of	enzym	nes																
8	Enzym	e usag	e in sta	arch a	nd can	dy ind	lustry													
9	Enzym	e usag	e in ba	kery																
10	Enzym	e usag	e in be	verag	e techr	nology	/													
11	Enzym	e usag	e in mi	lk and	l dairy i	indust	ry													
12	Enzym	e usag	e in oil	indus	try															
13	Enzym	e appli	cations	s in foo	od indu	istry														
14	14 Microbial enzyme production																			
22	Textbo Materia	extbooks, References and/or Other aterials:								 Powerpoint presentation Belitz,H.D, Grosch, W. Food Chemistry, 1999, Springer, Inc. Gıda Kimyası: İ. Saldamlı (ed.) Hacettepe Ü. Gıda Kimyası: M. Demirci, Namık Kemal Ü. 										
Activites								Numb	ber	F_D _L	Dura	Duration (hour)			Total Work Load (hour)					
Theore	tical							1.	nzyme 14	es in Fo	ooa Pro]: G.A.	тискег	28.00 ^{1. vvoods}					
Practicals/Labs									14				2.00			28.00				
Seast Assessment									14					14.00						
Homeworks									1				50.00			50.00				
Rigiect	ਜੈ Exam			_		10	<u> </u>	0.6	0.00				0.00			0.00				
Field S	tudies							(0				0.00			0.00				
Midter	n exam	Riect				1		50	50.00						0.00					
Others	none pre	1001						(0				0.00			0.00				
Final E	xams					2		10	100.00)		55.00					
Total Work Load									0100						175.00					
Sutateser&tede/ 30 hr														:	5.83					
ECTS Credit of the Course									6.00											
Total	Total									100.00										
Measurement and Evaluation Techniques Used in the For evaluation; a homework is given and the final exam is done.											am is									
24	ECTS	/ WO	RKL	OAD	TAB	LE														
25		CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																		
	PQ	1 PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16				
ÖK1	3	5	4	5	4	4	5	4	5	5	0	0	0	0	0	0				
ÖK2	4	4	3	3	3	4	4	3	5	3	0	0	0	0	0	0				
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ÖK3	4	5	2	4	3	3	5	4	5	2	0	0	0	0	0	0
ÖK4	5	3	2	3	3	5	5	5	3	2	0	0	0	0	0	0
ÖK5	4	4	5	4	5	4	4	4	3	4	0	0	0	0	0	0
ÖK6	5	3	3	3	4	5	3	3	3	3	0	0	0	0	0	0
ÖK7	4	2	4	3	5	2	2	5	4	5	0	0	0	0	0	0
ÖK8	4	4	3	5	4	3	4	4	3	3	0	0	0	0	0	0
ÖK9	5	3	4	4	5	5	2	3	5	5	0	0	0	0	0	0
ÖK10	3	5	4	4	3	3	2	5	3	5	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	ontrib 1 very low Ition evel:		2 low			3 Medium			4 High			5 Very High				