ADVANCED FOOD BIOCHEMISTRY

1	Course Title:	ADVANCED FOOD BIOCHEMISTRY	
2	Course Code:	GMB6023	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	2	
6	Semester:	3	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. CANAN ECE TAMER	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Bursa Uludağ Üniversitesi Ziraat Fakültesi Gıda Mühendisliği Bölümü 16059 Görükle/Bursa Tel: 0224 2941491 Fax: 0224 2941402 e-posta: etamer@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	The aim of the course is to give information about metabolic pathways in living systems and biochemistry of raw and processed foods (dairy foods, meat and marine products, fruits and vegetables).	
19	Contribution of the Course to Professional Development:	Students taking the course will learn in detail the metabolic pathways, biochemical changes in processed and raw foods.	
20	Learning Outcomes:		
		1	The students will be able to learn metabolism, metabolic patways and cycles
		2	The students will be able to explain of enzymes and their kinetic properties
		3	The students will be able to learn biochemical reactions of CHO in food processing and storage
		4	The students will be able to learn biochemical reactions of lipids in food processing and storage.
		5	The students will be able to know Krebs cycle
		6	The students will be able to learn photosynthesis
		7	The students will be able to have information about biochemistry of raw and processed foods (dairy foods, meat and marine products, fruits and vegetables
		8	
		9	
		10	
21	Course Content:		
	Course Content:		

Week	Theoretical	Practice
1	Metabolism: Termodynamic principles and energy in biochemical reactions	
2	Oxidation and phosphorylation of food macromolecules	
3	Biosynthesis of macromolecules	
4	Photosynthesis	
5	Enzymes, their kinetic properties and uses	
6	Carbohydrate metabolism	
7	Glicolytic patway; gluconeogenesis; Glyoxylate cycle	
8	Synthesis and metabolism of glicogene	
9	Starch biosynthesis	
10	Krebs cycle	
11	Lipid metabolism	
12	Biochemistry of raw and processed foods (dairy foods, meat and marine products)	
13	Biochemistry of raw and processed foods	
14	Biochemistry of raw and processed foods	
15	Biochemistry of raw and processed foods	
16	Biochemistry of raw and processed foods	
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19	Biochemistry of raw and processed foods	
20	Biochemistry of raw and processed foods	
21	Biochemistry of raw and processed foods	
22	Textbooks, References and/or Other Materials:	Lecture notes Aksoy, M. 2011. Beslenme Biyokimyası. Hatipoglu Yıldız, F. 2010. Advances in Food Biochemistry. CRC
23	Assesment	

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	3.00	42.00
Practicals/Labs		0	0.00	0.00
Self study and preperation		14	2.00	28.00
Homeworks		1	40.00	40.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams		0	0.00	0.00
Others		1	30.00	30.00
Final Exams	R	1	40.00	40.00
Total Work Load				180.00
Quiz	0	0.00		6.00
Total work load/ 30 hr				
ECTS Credit of the Course				6.00

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		For evaluation, a final exam is held together with homework and relative evaluation is applied.

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