FERMENTED FOOD TECHNOLOGY

1	Course Title:	FERMENTED FOOD TECHNOLOGY	
2	Course Code:	GIDS216	
3	Type of Course:	Optional	
4	Level of Course:	Short Cycle	
5	Year of Study:	2	
6	Semester:	4	
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:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr.Gör. ÇİĞDEM GÜCEYÜ	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	e-mail: mguldas@uludag.edu.tr, Tel. (224) 6768780–81, Adres: UÜ KARACABEY MYO, KARACABEY-BURSA	
17	Website:		
18	Objective of the Course:	In the course, scientific bases of fermentation technology will be investigated and production technologies such as pickle, olive, vinegar, wine, beer, boza, tarhana and red beet juice manufacturing will be undertaken. In addition, productions of organic acid, enzyme, amino acid and vitamin will also be considered.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	To be comprehended of scientific bases of fermentation and significance of microorganisms in biotechnological processes
		2	Learning of fermentation types and significance of fermentation in food industry
		3	Learning of basic production technologies used fermentation
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21	Course Content:		
	Course Content:		
Week	Theoretical	Practice	

1	Introduction to course, significance and position of fermentation technology in food industry, contents and scope of course	
2	Description of fermentation, significant microorganisms in terms of industry, cell structures, growths and growing conditions of bacteria and fungi	
3	Fermentation types, alcohol fermentation, lactic acid fermentation, acetic acid fermentation, citric acid fermentation and raw materials required for fermentation	
4	Technical principles of fermentation and drawing of flow diagram of a biotechnological process	
5	Pickle production technology	
6	Table olive production technology	
7	Vinegar production technology	
8	Repeating courses and midterm exam	
9	Wine production technology	
10	Beer production technology	
11	Boza production technology	
12	Tarhana (fermented powdered soup) production technology	
13	Salgam (fermented red beet juice) production technology	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	1.00	14.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	0	0.00	0.00
Homeworks	1	12.00	12.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	6.00	6.00
Others	4	5.00	20.00
Final Exams	1	10.00	10.00
Total Work Load			96.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

22	Textbooks, References and/or Other Materials:	Vinegar Technology, Nihat Aktan, Hatice Kalkan, Ege Üniversitesi Ziraat Fakültesi Yayınları, Bornova, İzmir. Alcohol and Alcoholic Beverages Technology, Işıl Fidan ve İsmet Sahin, Ankara üniversitesi Ziraat Fakülfesi Yayınları. Wine Production and Quality Control, Selma Güven, Canakkale Onsekiz Mart Üniversitesi Ziraat Fakültesi. Table Olive Technology, Nihat AKTAN, Hatice KALKAN, Ege Üniversitesi Basımevi, Bornova, İzmir, 1999. KALKAN, Ege Üniversitesi Basımevi, Bornova, İzmir, 1998.
23	Assesment	

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	3	2	2	2	3	4	3	3	2	2	5	3	0	0	0	0
ÖK2	3	3	3	2	3	5	4	3	3	2	3	3	0	0	0	0
ÖK3	3	3	3	2	4	5	4	2	3	2	3	3	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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