

FRUIT WINE SCIENCE AND TECHNOLOGY

1	Course Title:	FRUIT WINE SCIENCE AND TECHNOLOGY	
2	Course Code:	GMB5329	
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:	None	
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:	The aim of this course is to provide students with information about the production of fruit wines and its importance in the food industry, wine companies, problems to be encountered and solutions.	
19	Contribution of the Course to Professional Development:	The course builds on students' knowledge in the field of fruit wine industry.	
20	Learning Outcomes:		
		1	Wine production is learned in detail.
		2	The student has information about the importance of wine economy in the world and in our country.
		3	The student will have information about the characteristics of the wine company and the tools and equipment used in the wine company.
		4	The student will learn about the latest developments in wine technology.
		5	The student will have information about wine analysis methods.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Meeting the students and explaining the content of the lesson	Fruit juice analysis	

2	Wine raw material	Fruit juice analysis
3	Parts of the wine company	Wine analysis
4	Mechanical processes applied to grapes	Wine analysis
5	Must control, standardization and sulfurization	Wine Yeast Isolation and Identification
6	Alcohol fermentation and grain fermentation	Wine Yeast Isolation and Identification
7	Yeasts important in fermentation, separating the must and squeezing the pulp	Wine Bacteria Identification and Wine Defects
8	Breakdown of sugar, malolactic fermentation and fermentation time	Wine Bacteria Identification and Wine Defects
9	Mellowing, clarifying and packaging steps	Making Cider
10	Red wine production process	Making Cider
11	White wine production process	Analysis of Wine Aroma
12	Luxury wine production process	Analysis of Wine Aroma
13	Diseases and errors in wine	Instrumental Analysis of Phenolic Compounds
14	Fruit wine production process	Instrumental Analysis of Phenolic Compounds

22	Textbooks, References and/or Other Materials:	<ul style="list-style-type: none"> •Powerpoint presentations • Kılıç, O, 1996, Alcoholic Beverages Technology, U.Ü Printing House Vine R.P., Harkness E.M., Linton S.J., Wine Making, 2002, Kluwer Academic NY. • Kılıç, O, 1996, Alcoholic Power Technology, U.Ü Basımevi. • Aktan, N., Kalkan, H., 2000. Wine Technology. Kavaklıdere Education Publications No: 4. Ankara
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Activities		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	2.00	28.00
23	Assesment	14	2.00	28.00
Practicals/Labs		14	2.00	28.00
Self study and preperation	R	14	1.00	14.00
Homeworks		1	50.00	50.00
Quiz	0	0.00	0.00	0.00
Projects	0	0.00	0.00	0.00
Field Studies		0	0.00	0.00
Final Exam	1	50.00	0.00	0.00
Midterm exams		0	0.00	0.00
Others		0	0.00	0.00
Contribution of Term (Year) Learning Activities to Final Exams		50.00	55.00	55.00
Total Work Load				175.00
Contribution of Final Exam to Success Grade		50.00		5.83
Total work load/ 30 hr				
ECTS Credit of the Course				6.00
Measurement and Evaluation Techniques Used in the Course		For evaluation; a homework is given and the final exam is done.		

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	4	3	5	3	3	2	3	3	1	3	0	0	0	0	0	0
ÖK2	4	3	5	3	3	2	3	3	1	3	0	0	0	0	0	0
ÖK3	4	3	5	3	3	2	3	3	1	3	0	0	0	0	0	0

ÖK4	4	3	5	3	3	2	3	3	1	3	0	0	0	0	0	0
ÖK5	4	3	5	3	3	2	3	3	1	3	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							