FOOD ANALYSIS

1	Course Title:	FOOD ANALYSIS	
2	Course Code:	GMD2208	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	1.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	-	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. NIHAL TÜRKMEN EROL	
15	Course Lecturers:	-	
16	Contact information of the Course Coordinator:	Uludağ Üniversitesi Ziraat Fakültesi Gıda Mühendisliği Bölümü 16059 Görükle/Bursa Tel: 0224 2941565 Fax: 0224 2941402 e-posta: nihalt@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	Sampling, sample preparation, principles and application of fundamental food analysis and evaluation of analytical data.	
19	Contribution of the Course to Professional Development:	The course creates awareness and knowledge in students in the field of food analysis.	
20	Learning Outcomes:		
		1	The routine and specific analysis of foods
		2	Interpretation of analysis results
		3	The improvement in the handicrafts of students
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Reasons for food analysis and food analysis methods	Sampling, storing and preparation for analysis
2	Sampling and pretreatments applied to samples before analysis	Determination of moisture and dry matter in foods
3	Evaluation of analysis results using statistical methods	Determination of moisture and dry matter in foods

4	Importance of moisture and dry matter in foods, determination methods and evaluation of the analysis results	Determination of ash
5	Principles of titrimetric methods, importance of acidity analysis in foods and evaluation of the analysis results	DDetermination of acidity in foods with titrimetric method
6	Protein determination by Kjeldahl method and evaluation of the analysis results	Determination of acidity in foods with titrimetric method
7	The importance of ash determination in foods and evaluation of the analysis results	Determination of specific density in foods with areometers
8	Principles of spectrophotometric methods and determination of total phenolic substance	Determination of specific density in foods with areometers
9	Standard curve preparation and its use in the evaluation of results of phenolic substance analysis	Determination of salt in foods
10	Standard curve preparation and its use in the evaluation of results of phenolic substance analysis	Determination of salt in foods
11	Determination of antioxidant capacity in foods by DPPH method and evaluation of the results	Determination of total phenolic substance by spectrophotometric method
12	Chromatographic methods and their principles	Determination of total phenolic substance by spectrophotometric method
13	Steps to be applied in the analysis of individual food components by liquid chromatography (HPLC)	Analysis of pigments by paper chromatography
14	Steps to be applied in the analysis of individual food components by liquid chromatography (HPLC)	Analysis of pigments by paper chromatography

22	Textbooks, References and/or Other Materials:	Uylaşer V., Başoğlu F. 2011. Temel Gıda Analizleri, Dora Yayıncılık, ISBN 978-605-4485-13-0, 125s. http://www.gkgm.gov.tr/
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	30.00
Quiz	0	0.00
Home work-project	12	10.00
Final Exam	1	60.00
Total	14	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		In the evaluation of the course, midterm and final exams are made and weekly homework is taken.

24	**ECTS / WORK LOAD TABLE**

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	14	2.00	28.00
Homeworks	12	2.00	24.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	10.00	10.00
Others	0	0.00	0.00
Final Exams	1	20.00	20.00
Total Work Load			124.00
Total work load/ 30 hr			4.13
ECTS Credit of the Course			4.00

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