FOODOMICS AND GENOMICS IN FOOD SCIENCE

1	Course Title:	FOODOMICS AND GENOMICS IN FOOD SCIENCE
2	Course Code:	BYT6024
3	Type of Course:	Optional
4	Level of Course:	Third Cycle
5	Year of Study:	1
6	Semester:	2
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. OZAN GÜRBÜZ
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	Prof. Dr. Ozan Gürbüz ozang@uludag.edu.tr B.U.Ü Ziraat Fakültesi Gıda Mühendisliği Bölümü
17	Website:	
18	Objective of the Course:	The aim of this course is to teach students the methods and areas of use of new omics technologies in food science, to gain knowledge about new omics technologies and bioinformatics tools, to investigate the complex relationship between nutrition, food and metabolism, and to gain the ability to apply them to doctoral studies.
19	Contribution of the Course to Professional Development:	Evaluating and using the knowledge gained in the field of Foodomics and Genomics with a systematic approach
20	Learning Outcomes:	
	1	The student will have information about the general concepts of foodomics and genomics.
	2	The student learns proteomics-based techniques for the characterization of food allergens.
	3	Student comprehends the use of lipidomics and proteomics in nutrition systems biology.
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21	Course Content:	
	Course Content:	
Week	Theoretical	Practice
1	Foodomics: Principles and Applications	
2	Genomics: Principles and Applications	

3	Foodomics in food science	
4	Genomic in food science	
5	For Foodomics and Genomics Instruments and Analysis Methods	
6	Proteomics-Based Techniques for Characterization of Food Allergens	
7	Proteomics in Nutritional Systems Biology: Defining Health	
8	Lipidomics	
9	Metabolomics of Diet-Associated Disease	
10	Ms-Based Methodologies for Studying Microbial Metabolome	
11	Investigation of the Efficacy of Antioxidant Food Supplements by Advanced Proteomics Methods	
12	Chemometry, Mass-spectrometry and Foodomics	
13	Transgenik Gıdaların Geliştirilmesi ve Karakterizasyonu için Ms Tabanlı Metodolojiler	
14	MS-Based Metabolomic Approaches for Food Safety, Quality and Traceability	

22	Textbooks, References and/or Other Materials:	Powerpoint prensentations Foodomics: Advanced Mass Spectrometry in Modern Food Science and Nutritio

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	3	14.00	42.00
Homeworks	4	7.00	28.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm Exams	1	25.00	25.00
Others	1	18.00	18.00
Final Exams	1	25.00	25.00
Total Work Load			180.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

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