

# FOODOMICS AND GENOMICS IN FOOD SCIENCE

<b>1</b>	Course Title:	FOODOMICS AND GENOMICS IN FOOD SCIENCE	
<b>2</b>	Course Code:	BYT6024	
<b>3</b>	Type of Course:	Optional	
<b>4</b>	Level of Course:	Third Cycle	
<b>5</b>	Year of Study:	1	
<b>6</b>	Semester:	2	
<b>7</b>	ECTS Credits Allocated:	6.00	
<b>8</b>	Theoretical (hour/week):	3.00	
<b>9</b>	Practice (hour/week):	0.00	
<b>10</b>	Laboratory (hour/week):	0	
<b>11</b>	Prerequisites:	-	
<b>12</b>	Language:	Turkish	
<b>13</b>	Mode of Delivery:	Face to face	
<b>14</b>	Course Coordinator:	Prof. Dr. OZAN GÜRBÜZ	
<b>15</b>	Course Lecturers:		
<b>16</b>	Contact information of the Course Coordinator:	Prof. Dr. Ozan Gürbüz ozang@uludag.edu.tr B.U.Ü Ziraat Fakültesi Gıda Mühendisliği Bölümü	
<b>17</b>	Website:		
<b>18</b>	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.	
<b>19</b>	Contribution of the Course to Professional Development:	Evaluating and using the knowledge gained in the field of Foodomics and Genomics with a systematic approach	
<b>20</b>	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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<b>21</b>	Course Content:		
		<b>Course Content:</b>	
Week	Theoretical	Practice	
<b>1</b>	Foodomics: Principles and Applications		
<b>2</b>	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 presentations Foodomics: Advanced Mass Spectrometry in Modern Food Science and Nutritio
23	Assesment	
<b>TERM LEARNING ACTIVITIES</b>		<b>NUMBE R</b>
		<b>WEIGHT</b>
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
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		The system of relative evaluation is applied
24	<b>ECTS / WORK LOAD TABLE</b>	

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
<b>LO: Learning Objectives    PQ: Program Qualifications</b>																
<b>Contribution Level:</b>	<b>1 very low</b>			<b>2 low</b>			<b>3 Medium</b>			<b>4 High</b>			<b>5 Very High</b>			