BDB204 - Food Chemistry and Applications-II

Course Name	Code	Term	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	ECTS
Food Chemistry and Applications-II	BDB204	4th Semester/ Spring	2	0	2	4

Prerequisites	None
Language of Instruction	Turkish
Course Type	Compulsory
Learning and Teaching Techniques of The Course	Lecture, question and answer, Experiment (laboratory) method
Instructor(s)	
Goal	This course aims to learn the chemical structures, functions, production methods of foods and analytical techniques used for their analysis.
Learning Outcomes	1.Learns and applies objective and subjective methods used in the evaluation of food quality, 2. Learn general principles of food processing methods and new and frequently used techniques, 3. Understands the production technologies applied to different food groups and the changes in food structure, 4. Understand the effects of these changes on health, 5. Defines functional foods and classifies them according to bioactive food components,
References	1.Belitz HD, Grosch W. Food Chemistry. Springer-Verlag Berlin Heidelberg Germany, 1999. 2.Fennema OR. Food Chemisrty. Third Ed. MarcelDekker, INC. New York, 1996 3.American Oil Chemists' Society (www.aocs.org) 4.Codex Alimentarius Commision (http://www.fsis.usda.gov/codex/ind ex.asp) 5.American Association of Cereal Chemist (http://www.aaccnet.org/) 6.World and Health Organization (www. who.org) 7.Food and Drug Administartion (www. https://www.fda.gov/)

Course Outline Weekly:

WEEKS	TOPICS
1. Week	Evaluation of food quality
2. Week	General characteristics of milk and dairy products, applied nutrient processing methods and related laboratory practices
3. Week	General characteristics of meat, poultry, fish and products, applied nutrition methods and related laboratory practices
4. Week	General characteristics of egg, applied nutrient processing methods and related laboratory practices
5. Week	General characteristics of cereal and cereal products, applied nutrition methods and related laboratory practices
6. Week	General characteristics of vegetables and fruits, applied nutritional methods
7. Week	General characteristics of beverages (tea, coffee, cocoa, etc.), applied nutritional methods
8. Week	**MIDTERM EXAM**
9. Week	General properties of fats, applied nutrient processing methods and related laboratory practices
10. Week	General characteristics of sugar and its products, applied nutritional methods
11. Week	Basic food processing and storage methods (heat treatment, freezing, radiation, biotechnology, evaporation, dehydration, high pressure treatment, canned food etc.)
12. Week	Packing methods used in food industry
13. Week	Functional foods (definition, developmental process of functional foods, classification of functional foods according to bioactive components - probiotics, prebiotics, phytochemicals, fatty acids etc. Factors affecting food quality and methods used for subjective evaluation
14. Week	Functional foods (definition, developmental process of functional foods, classification of functional foods according to bioactive components - probiotics, prebiotics, phytochemicals, fatty acids etc. Factors affecting food quality and methods used for subjective evaluation
15. Week	Functional foods (definition, developmental process of functional foods, classification of functional foods according to bioactive components - probiotics, prebiotics, phytochemicals, fatty acids etc. Factors affecting food quality and methods used for subjective evaluation

Student Work Load Table

Activities	Number	Duration	Total Work Load
Course Duration	14	2	28
Laboratory	5	2	10
Practice			
Field Study			
Study Time of Outside of Class (Pre-Study, Practice, Etc.)	14	3	42
Presentations (Video shoot/Poster preparation/Oral presentation, Etc.)			
Seminars			
Project			
Case study			
Role playing, Dramatization			
Writing articles, Critique			
Time to Prepare for Midterm Exam	1	10	10
Final Exam Preparation Time	1	10	10
Total Work Load (hour) / 25(s)	**100/25=4**		
ECTS	**4**		

Evaluation System

Mid-Term Studies	**Number**	**Contribution**
Midterm exams	1	50%
Quiz		
Laboratory	5	50%
Practice		
Field Study		
Course Internship (If There Is)		
Homework's		
Presentation and Seminar		
Project		
Other evaluation methods		
Total Time to Activities for Midterm		100
Final works		
Final	1	100%
Homework		
Practice		
Laboratory		
Total Time to Activities for Midterm		100
Contribution of Midterm Studies on Grades		40%
Contribution of Final Exam on Grades		60%
Total		100

The relationship between learning outcomes and the program qualifications of the courses

Program yeterlilikleri	**Dersin Öğrenme Çıktıları**				
	Ö.Ç.1	**Ö.Ç. 2**	**Ö.Ç.3**	**Ö.Ç.4**	**Ö.Ç.5**
1. Enables the students to use theoretical knowledge based on basic and social sciences in practice.	1	2	2	3	3
2. Has the ability to use equipment and information Technologies required for the professional practice efficiently.	4	3	3	1	1
3. Knows his rights, duties and responsibilities towards the society, colleagues, and other professions, individuals and patients, and learns how to behave in harmony with the professional ethical rules.	2	1	1	1	1
4. When confronted with problems within any field of Nutrition and Dietetics, has the ability to observe, diagnose, assess, report and come up with solutions thanks to their up-to-date knowledge and skills.	3	3	3	3	2
5. Gains efficient working skills based on the principles of effective communication, responsibility, solution-oriented working in disciplinary and interdisciplinary conditions.	4	3	3	3	2
6. Has the ability to make a plan for a research individually or as part of a team, make experiments, collect and analyze the data, interpret and write a report by using theoretical / practical knowledge and skills gained in the field of Nutrition and Dietetics.	3	3	4	3	4
7. Develops suggestions for health/sick individuals and those at risk considering their lifelong diet.	1	3	4	5	5
8. Gains knowledge to contribute to the diet plans and politics to be developed based on the needs of the individuals and the society.	3	4	5	5	5
9. Improves themselves by following the latest advances in their profession nationally and internationally, and acquires awareness in lifelong learning.	4	4	4	5	5

Contribution to the level of proficiency: 1. Lowest, 2. Low / Medium, 3. Average, 4. High, 5. Excellent