Nutritional Chemistry and Application I

Course Name	Code	Term	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	ECTS
Nutritional Chemistry and Application I	BDB203	6.Autumn	2	0	2	4
Prerequisites	None					
Language of Instruction	Turkish					
Course Type	Compulsory					
Learning and Teaching Techniques of The Course	Expression Question & Answer Display, Application Laboratory					
Instructor(s)	Prof. Dr. Fahrettin GÖĞÜŞ					
Goal	It is the concept of nutrients such as carbohydrates, proteins and fats as well as the chemical properties of enzymes, pigments and flavor compounds and changes in these properties during the production-consumption process					
Learning Outcomes	1. To learn the physical, chemical and functional properties of carbohydrate, protein, fat, enzyme, pigment, taste and odor components in foods 1. 2. Understand the physical and chemical reactions affecting the quality of food 2. 3. Be able to understand the basic principles of basic analysis of food 3. 4. Ability to use basic qualitative / quantitative methods in nutritional analysis 4. 5. To be able to interpret the results of the analysis in the framework of the information to be taught, to explain it in writing and orally					
References	1. Belitz H.D. Grosch, W. (1999). Food Chemistry. Springer-Verlag Berlin Heidelberg-Germany. 2. Yücecan, S. Baykan, S. (1981). Besin Kimyası					

Course Outline Weekly:

WEEKS	TOPİCS
1. Week	Colloidal Systems / Solvents
2. Week	Colloidal systems / Solvents and laboratory applications
3. Week	Chemical and functional properties of the water of the foods and related laboratory applications
4. Week	Chemical and functional properties of carbohydrates in foods
5. Week	Chemical and functional properties of carbohydrates in foods and related laboratory practices
6. Week	Chemical and functional properties of proteins in foods
7. Week	Chemical and functional properties of proteins in foods and related laboratory applications

8. Week	**MIDTERM EXAM**
9. Week	Chemical and functional properties of oils in foods
10. Week	Chemical and functional properties of fats and their related laboratory applications
11. Week	The properties of enzymes in foods, their functions
12. Week	The properties of enzymes in foods, their functions and related laboratory practices
13. Week	Chemical and functional properties of pigments in foods and related laboratory applications
14. Week	Chemical and functional properties of pigments in foods and related laboratory applications
15. Week	Chemical and functional properties of taste and odor components of foods and related laboratory applications

Student Work Load Table

Activities	**Number**	**Duration**	**Total Work Load**
Course Duration	14	2	28
Laboratory	14	2	28
Practice			
Field Study			
Study Time Of Outside Of Class (Pre-Study, Practice, Etc.)	14	2	28
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	6	6
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	1	%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		%50
Contribution Of Final Exam On Grades		%50
Total		100

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

Program Qualifications	Learning outcomes				
	L.O.1	**L.O. 2**	**L.O.3**	**L.O.4**	**L.O.5**
1. To acquire information in the basic and social sciences as the Dietitian as he profession entails and make use of it for life.	3	3	3	3	3
2. To develop personalized diet and programme in accordance with the principles of adequate and balanced nutrition.					
3. To improve and develop the food and nutrition plans and policy for the development of individuals with the energy and nutrient element requirements with scientific method detection, health protection	1	1	1		
4. To determine and evaluate individual, the community and the patient's nutritional status by applying up-to-date information gained in the field of nutrition and dietetics. She/he can use the knowledge to raise the level of community health and the quality of life.					
5. Assess the nutritional status of the patients, evaluate the clinical symptoms, plan and apply individualized medical nutrition therapy for the patients.					
6. The student can understand the basic values and culture of the society he/she is living in and gain the skill to transform him/herself in a positive way					
7. Dietitian can improve products, make laboratory practice on elements affecting analysis and quality of nutrition, review and evaluate them regarding the legal regulations	5	5	5	5	5
8. The student embraces the concepts with regard to biological systems that form the basis of human health, Anatomy, Physiology, and the sustainability of them.					
9. The student can participate in Nutrition and Dietetics practices individually and/or within a team, use, apply, discuss and share scientific and evidence based knowledge in nutrition and dietetics practice with team and team members, develop and demonstrate effective skills using oral, print, visual methods in communicating and expressing thoughts and ideas, communicate with all stakeholders within ethical principles. Develop					

	and demonstrate effective communications skills using oral, print, visual, electronic and mass media methods					
10.	Dietitian has knowledge to develop food and nutrition plans and policies for protection of health, in order to improvement and development by using methods for determining the nutritional status.					

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