COURSE NAME

Course Name	Code	Term	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	ECTS
Nutrient Microbiology	BDB206	4th Semester/Spring Term	2	0	2	4
Prerequisites	None					
Language of Instruction	Turkish					
Course Type	Compulsory					
Learning and Teaching Techniques of The Course	Expression Question & Answer Display Practice - Practice					
Instructor(s)	Prof. Dr. Osman Erkmen					
Goal	The basic concepts of food microbiology and its applications.					
Learning Outcomes	1. To be able to learn basic concepts and applications of food microbiology. 2. To be able to learn microorganism types and their causes. 3. To learn causes of food poisoning and ways of prevention. 4. To be informed about pathogenic indicators and factors causing deterioration in foods. 5. Learning microbial impairments in basic food groups. 6. To be able to learn the chemical and microbiological changes in food during the processing and storage of food. 7. To learn basic storage techniques in food industry. 8. Get information about food contaminants. 9. To learn the basic concepts of hygiene, sanitation and food safety					
References	1. Food Microbiology, Michael P. Doyle and Lary R Beuchat 2007 2. Osman Erkmen (Editor). Food Microbiology. Eflatun Publishing House, 4th edition, Ankara, 2013. 3. Osman Erkmen and T. Faruk Bozoğlu. Food Microbiology - Principles into Practice, Volume 1: Microorganisms Related to Foods, Foodborne Diseases and Food Spoilage. John Wiley and Sons Limited, Chichester, England, 2016. 4. Osman Erkmen and T. Faruk Bozoğlu. Food Microbiology - Principles into Practice, Volume 2: Food Preservation and Processing. John Wiley and Sons Limited, Chichester, England, 2016.					

Course Outline Weekly:

WEEKS	TOPİCS
1. Week	Food production in the world, consumption problems, health risks from food
2. Week	Basic concepts of food microbiology Epidemiology of foodborne diseases
3. Week	Factors affecting microbial synthesis in foods Deterioration indicators in foods Pathogen indicators in foods
4. Week	Microbial deterioration in meat and meat products
5. Week	Microbial deterioration in milk and dairy products

6. Week	Microbial deterioration in tuberculosis and cereals
7. Week	Microbial deterioration in vegetables and fruits
8. Week	**MIDTERM EXAM**
9. Week	Definition, pathogenesis, sources and prevention routes of foodborne microbial diseases (infections, intoxication and toxin infections)
10. Week	Foodborne bacterial disease agents
11. Week	Foodborne viruses
12. Week	Food and waterborne parasites
13. Week	Molds and mushrooms
14. Week	Natural food toxins
15. Week	General principles of food preservation and protection methods, fermentation

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		100
Total Time To Activities For Midterm		
Final works	1	%100
Final		
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**	**L.O.6**	**L.O.7**	**L.O.8**	**L.O.9**
1. To acquire information in the basic and social sciences as the Dietitian as he profession entails and make use of it for life.									
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									
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.				2	3	3	3	3	3
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	3	3	3	3	4	4	4	4	4
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