



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Food Microbiology II							
Course Code		BDB202		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	2
Objectives of the Course		The main food items transmitted mikroorganima resources, consisting of various microorganisms in food microbiological degradation, diseases and poisoning with microbial toxins and microbial growth in foods protective systems that control as undergraduate students is to make aware the information.							
Course Content		Sources of contamination in foods, cereal and cereal products, sugar and sugar products in the milk and products, vegetables and fruits, meat and meat products, microbiological degradation, preserving foods, causes deterioration of the microbiological and other milk, starter the starter cultures, varieties and Bacteriophage, bacterial food poisoning, salmonella and other bacterial poisoning, mycotoxins and mikotoksikozis safety tips from the food poisoning. Lab: Meat, canned goods and cereal products, microbiological examination, product-specific microorganism isolation and identification operations.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Demonstration, Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)		Prof. Hilmi YAMAN							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	2	40
Final Examination	1	60

Recommended or Required Reading

1	Ünlütürk, A. ve F. Turantaş, 1999; Gıda Mikrobiyolojisi, Mengi Tan Basımevi, İzmir.
2	Özdemir, S. ve Sert S. 1994; Gıda Mikrobiyolojisi Tatbikat Notları, Atatürk Üni. Ziraat Fak. Yayınları, Erzurum.
3	Jay, J. M., Loesneer, M. J. and D. A. Golden, 2005; Modern Food Microbiology 7th Edit., Springer Pub.
4	Corry, J.E.L., Curtis, G.D.W., Baird, R.M., 1995, Culture Media for Food Microbiology, Elseiver Science.
5	Marth, E.H. and. Steele, J.L., 2001; Applied Dairy Microbiology, Marcel Dekker.

Week	Weekly Detailed Course Contents	
1	Theoretical	The Main Food Items Transmitted Microorganism Resources
	Laboratory	Microbiological analysis of foods (Salmonella spp. and Clostridium perfringens)
2	Theoretical	The Main Food Items Transmitted Microorganism Resources
	Laboratory	Microbiological analysis of foods (Salmonella spp. and Clostridium perfringens)
3	Theoretical	Microorganisms In Foods They Create Chemical Changes
	Laboratory	Microbiological analysis of foods (Salmonella spp. and Clostridium perfringens)
4	Theoretical	Microbiological Degradation seen in grains and Products
	Laboratory	Microbiological analysis of foods (Salmonella spp. and Clostridium perfringens)
5	Theoretical	Sugar and sugar Products Microbiological Degradation, pesticides in the microbiological Degradation that occurred
	Laboratory	Application of microbiological criteria for evaluation of test results, Microbiological analysis of foodcontact surfaces and atmosphere
6	Theoretical	Prevents Breakdowns, dried fruit and Vegetables Microbiology
	Laboratory	Application of microbiological criteria for evaluation of test results, Microbiological analysis of foodcontact surfaces and atmosphere
7	Theoretical	Animal Source Food Microbiological Deterioration That Occurs
	Laboratory	Biochemical tests for identification of microorganisms, Introduction to rapid microbiological testtechniques
8	Theoretical	Mycobiological Deterioration in Foods of Animal Origin (MIDTERM EXAM)
9	Theoretical	Milk and Products Microbiological Degradation
	Laboratory	Biochemical tests for identification of microorganisms, Introduction to rapid microbiological testtechniques
10	Theoretical	Milk and Products Microbiological Degradation



10	Laboratory	Microbiological analysis of drinking water
11	Theoretical	Milk and Products Using Thermal Process, Starter cultures, Starter Bacteriophages
	Laboratory	Microbiological analysis of drinking water
12	Theoretical	Canned Foods, The Causes Of Deterioration
	Laboratory	Project study- Microbial kinetic (Determination of D and z values)
13	Theoretical	Is Meat Microbiological Types
	Laboratory	Project study- Microbial kinetic (Determination of D and z values)
14	Theoretical	Food poisoning, Microbial Food Poisoning

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	1	2	39
Laboratory	13	1	2	39
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	main microorganism that is transmitted to the food source.
2	Types of microorganisms in foods they create chemical changes.
3	Grain and products, sugar and sugar products, plant-derived foods, such as fruits and vegetables consists of microbiological spoilage knows and why.
4	Meat and products, animal food, such as milk and dairy products of microbiological spoilage knows and why.
5	Milk and products, heat treatment applications.
6	Starter culture knows the concept and uses for food applications, starter cultures.
7	know the causes of deterioration and Canned products.
8	know the causes of food poisoning and prevention describes ways.

Programme Outcomes (Nutrition and Dietetics)

1	Assess, apply and evaluate the accuracy, reliability and validity of basic knowledge and evidence based current scientific developments on nutrition and dietetics.
2	Assess scientifically the energy and nutrients need of individuals and develop nutrition plans and programs for the clients according to the principles of adequate and balanced nutrition and assessment of energy and nutrient requirements
3	Develop food and nutrition plans and policies for the prevention and promotion of healthy lifestyle applying the methods of nutritional assessment for the population.
4	Assess the nutritional status of the patients, evaluate the clinical symptoms, plan and apply individualized medical nutrition therapy for the patients.
5	Evaluate the factors affecting the quality of food consumed by the individuals and populations from production to consumption and implement the legal standards and legislations on food safety and food security.
6	Consider, interpret and apply the basic scientific knowledge on nutrition and dietetics especially have skills on critical thinking, problem solving and decision making and use effectively the appropriate current technologies and computer, demonstrate skills in preparing research manuscripts, project proposals, collecting and verifying data and writing report.
7	Assess, evaluate and interpret the nutritional status of the individuals and population groups using current knowledge, develop preventive measures, apply medical nutrition therapy, demonstrate active participation, teamwork and contributions with national and international stakeholders in health and social areas, in terms of ethical principles.
8	Plan menus in the institutional food service systems depending on the energy and nutrient requirements of target groups in the scope of nutrition and dietetic principles, take care of food safety in all settings from purchase of food to service, apply appropriate service using technological developments.
9	Develop and use effective strategies for the education, counseling and encouragement of individuals and population groups to facilitate behavior change and choose healthy and safety foods, prepare and update the related educational materials.
10	Apply laboratory work on product development, food analysis and related factors effecting food quality and interpret the results and evaluate them according to the legal arrangements.
11	Plan, manage, evaluate, monitor and report researches and programs to educate and increase and improve the knowledge and awareness of individuals and population groups on healthy nutrition during all lifecycle period, and lead such activities, support and take role in the preparation and implementation of national and international food and nutrition plans and policies.
12	Work and perform duties in the scope of occupational responsibilities and ethical principles, understand the importance of lifelong learning, follow the latest developments (innovations) in science, technology and health, demonstrate professional attributes for the enhancement of nutrition and dietetics profession.



13	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
14	Plan, apply, monitor and evaluate individualized medical nutrition therapy within interdisciplinary approaches, considering the sociocultural, economical status of patients in various age groups and also contribute to clinical researches.

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5	L6	L7	L8
P1	3	4	3	2	3	4	3	2
P2	3	3	3	2	3	3	3	2
P3	2	3	2	3	2	3	2	3
P4	2	2	2	2	3	2	2	3
P5	3	1	4	4	2	1	4	2
P6	4	2	2	2	2	4	2	4
P7	2	4	2	3	4	2	3	2
P8	3	2	2	3	2	3	2	3
P9	2	3	1	2	3	3	4	2
P10	4	2	3	4	2	2	2	4
P11	2	4	2	2	4	4	3	2
P12	3	2	3	3	2	2	2	2
P13	2	3	3	2	3	2	4	3
P14	4	2	2	4	2	4	5	2

