



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Food Microbiology I							
Course Code		BDB201		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		Classification of microorganisms, bacteria development and important features, characteristics of fungi and yeast, these microorganisms to food-transmitted microorganisms and food contamination to learn students about shapes .							
Course Content		The subject of food microbiology and its history, bacteria and important features, food microbiology is critical to mold fungi, yeast and properties are propagated to the microorganism food sources, microbiological development effects in foods factors: internal factors and external factors. Lab: General principles, getting food samples of water microbiological examination: total bacteria count, coliform group of bacteria identification and be searched, the search for the fecal streptococci of fecal coliform search for milk and dairy products of of Bacteriological examination, microbiological deterioration in vegetables.							
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	70

Recommended or Required Reading

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

Week	Weekly Detailed Course Contents	
1	Theoretical	Food Mikrobiyolojisinin and History
	Laboratory	Guidelines in a microbiology laboratory, Basic microbiological techniques with emphasis on foods.
2	Theoretical	Molds and Properties
	Laboratory	Microscopy, staining methods and microscopic examination of microorganisms (simple, gram stain)
3	Theoretical	Molds and Properties
	Laboratory	Microscopy, staining methods and microscopic examination of microorganisms (simple, gram stain)
4	Theoretical	Food Microbiology Critical Mold Types
	Laboratory	Microscopy, staining methods and microscopic examination of microorganisms (capsule, flagella, endospore stain)
5	Theoretical	Food Microbiology Critical Mold Types
	Laboratory	Microscopy, staining methods and microscopic examination of microorganisms (capsule, flagella, endospore stain)
6	Theoretical	Yeast and Properties
	Laboratory	Enumeration of bacteria, moulds and yeast by plate count
7	Theoretical	Yeast and Properties
	Laboratory	Enumeration of bacteria, moulds and yeast by plate count
8	Intermediate Exam	Midterm Exam
9	Theoretical	Industrial Aspects, What Is Important Is That Some Yeast Types
	Laboratory	Microbiological analysis of foods by membrane filtration method and most probable number techniques



10	Theoretical	External Factors That Affect Microbiological Development
	Laboratory	Microbiological analysis of foods by membrane filtration method and most probable number techniques
11	Theoretical	O/R Potential, Food Items
	Laboratory	Direct microscobic count
12	Theoretical	Inhibitory Substances, Biological Barriers
	Laboratory	Direct microscobic count
13	Theoretical	Internal Factors; Temperature
	Laboratory	Sampling and sampling plans ,Microbiological analysis of foods (Coliform, E. coli and Staphylococcus aureus)
14	Theoretical	Relative Humidity The surrounding Gases and Consantrations
	Laboratory	Sampling and sampling plans ,Microbiological analysis of foods (Coliform, E. coli and Staphylococcus aureus)
15	Final Exam	Final Exam

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	the subject of Microbiology and Food history.
2	Learn Bacteria and their important characteristics and discusses.
3	Food Microbiology fungi and their important characteristics.
4	Food Microbiology yeast for important terms and their general characteristics and discusses.
5	internal factors affecting the microbiological development makes a comment about.
6	external factors affecting the microbiological development makes a comment about.
7	Bacteria, mold and yeast knows the differences between and.
8	General principles and Food samples for microbiological examination of foods almada will have information.

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	2	3	2	3	2	1	2	2
P2	2	3	2	3	2	2	2	2
P3	1	2	2	3	4	3	3	2
P4	2	2	1	2	3	3	3	3
P5	3	2	1	2	3	3	3	3
P6	3	3	2	2	3	2	2	2
P7	2	3	3	3	4	4	2	4
P8	1	2	3	3	2	2	4	2
P9	1	2	4	3	3	2	2	3
P10	2	4	2	4	2	4	3	3
P11	3	2	3	2	3	1	2	2
P12	3	3	2	3	2	2	2	4
P13	2	2	1	2	2	3	3	2
P14	1	4	4	3	3	2	2	3

