



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Probiotics and Health							
Course Code		BDB219		Couse Level		First Cycle (Bachelor's Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		To have knowledge about probiotics: general properties, beneficial health effects, importance in terms of food industry, sources, usage area, isolation and identification methods of probiotics.							
Course Content		Probiotic bacteria and yeasts; general properties that probiotics should have; metabolites produced by probiotics; isolation, identification and preservation methods of probiotics; pharmaceutical products involving probiotics, probiotics used as starter culture in the production of foods, health benefits of probiotics, novel products developed by probiotics.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)		Ins. Mahmut CERİ							

Prerequisites & Co-requisites

ECTS Requisite	30
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Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Smith, A., Jones, C.L., 2012. Probiotics: Sources, Types and Health Benefits. Nova Science Publishers, Inc. New York.
2	Floch, M., Kim, A., 2010. Probiotics. SLACK Incorporated, USA.
3	Versalovic, J., Wilson, M., 2008. Therapeutic Microbiology : Probiotics and Related Strategies. ASM Press, USA.
4	Holzapfel, W.H., Wood, B.J.B., 2014. Lactic Acid Bacteria: Biodiversity and Taxonomy, John Wiley & Sons, Ltd. Published.
5	Noomhorm, A., Ahmad, I., Anal, A.K., 2014. Functional Foods and Dietary Supplements. Wiley-Blackwell, UK.

Week	Weekly Detailed Course Contents	
1	Theoretical	Definitions: Probiotic, prebiotic
2	Theoretical	Probiotic bacteria
3	Theoretical	Probiotic yeasts
4	Theoretical	Isolation and identification methods of probiotics
5	Theoretical	Preservation methods of probiotics
6	Theoretical	Metabolites produced by probiotic microorganisms
7	Theoretical	Health benefits of probiotics
8	Intermediate Exam	Midterm Exam
9	Theoretical	Pharmaceutical products prepared by probiotic microorganisms
10	Theoretical	Probiotics used in food industry as starter culture
11	Theoretical	Probiotics in dairy products
12	Theoretical	Probiotics in meat products
13	Theoretical	Novel products developed by probiotics
14	Theoretical	Report presentation
15	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	4	2	78
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	To learn probiotic and prebiotic concepts
2	To recognize probiotic microorganisms
3	To learn isolation, identification and preservation methods of probiotics
4	To have knowledge about the beneficial health effects of probiotics
5	To have knowledge about foods involving probiotics
6	To have knowledge about novel foods developed by probiotics
7	Gaining experience to search literature and to prepare report and presentation

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
P1	3	2	2	3	4	3	3
P2	3	2	2	3	2	3	3
P3	2	2	3	2	3	2	2
P4	2	4	2	4	3	3	2
P5	2	2	4	4	2	4	2
P6	3	3	4	2	3	4	3
P7	4	2	2	3	2	2	3
P8	2	4	3	3	3	3	2



P9	3	2	2	2	2	2	4
P10	2	3	2	4	2	3	3
P11	4	2	3	2	2	2	3
P12	2	3	2	3	3	2	2
P13	3	4	2	2	2	3	3
P14	2	2	2	3	3	3	2

